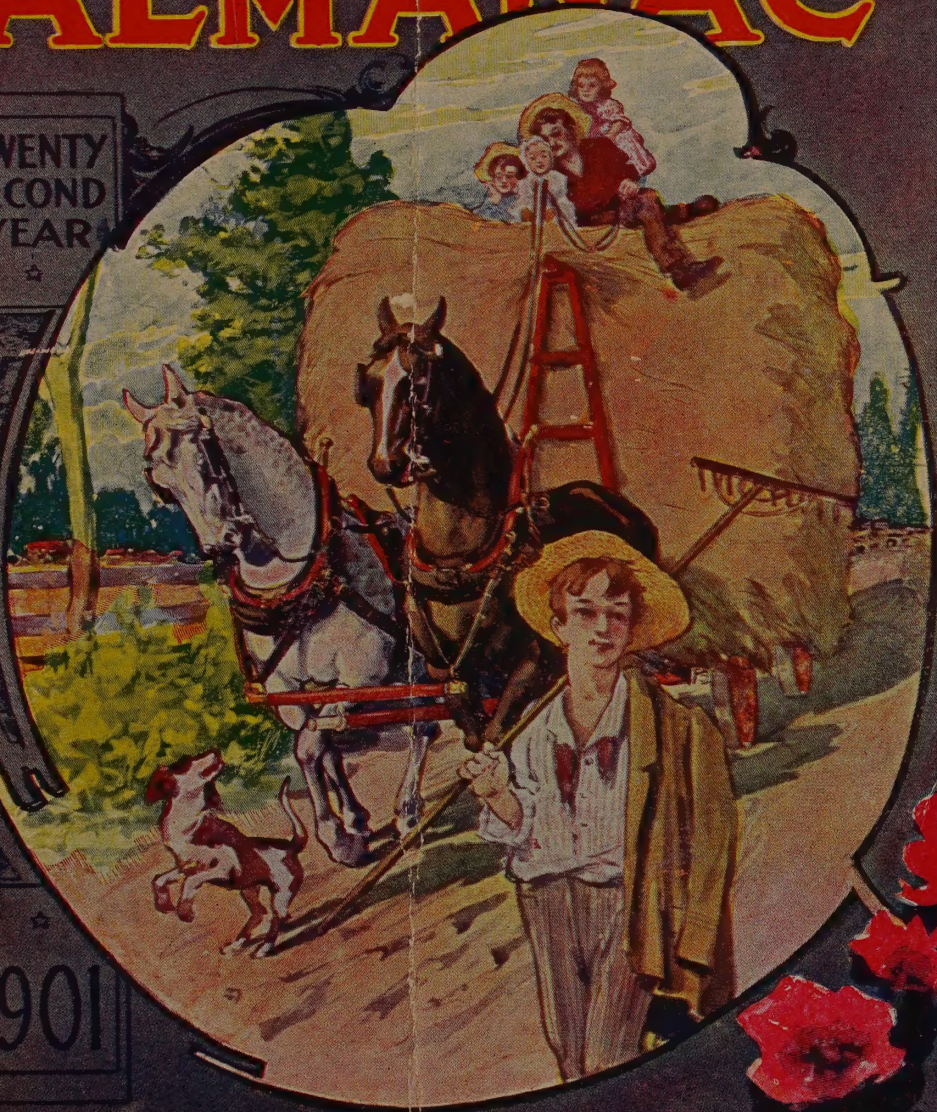


# AMERICAN FARMERS' ALMANAC

TWENTY  
SECOND  
YEAR

1901

GALE MFG. COMPANY, ALBION, MICH.  
SEE PAGES A, B, C, D AND 70





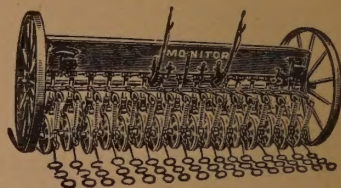
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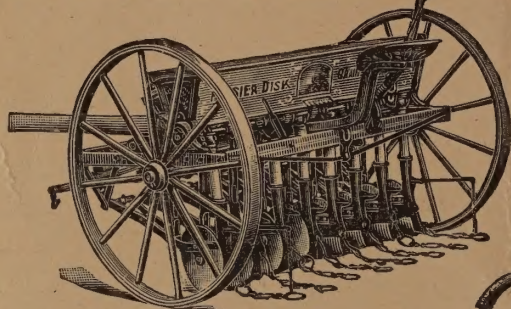
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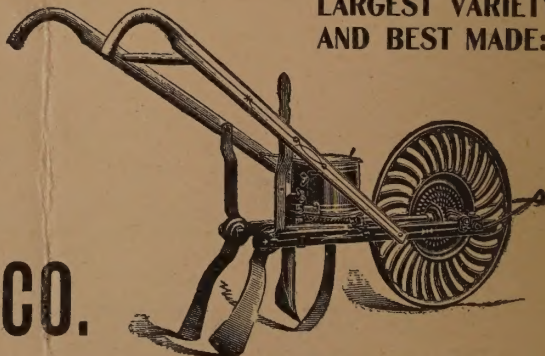


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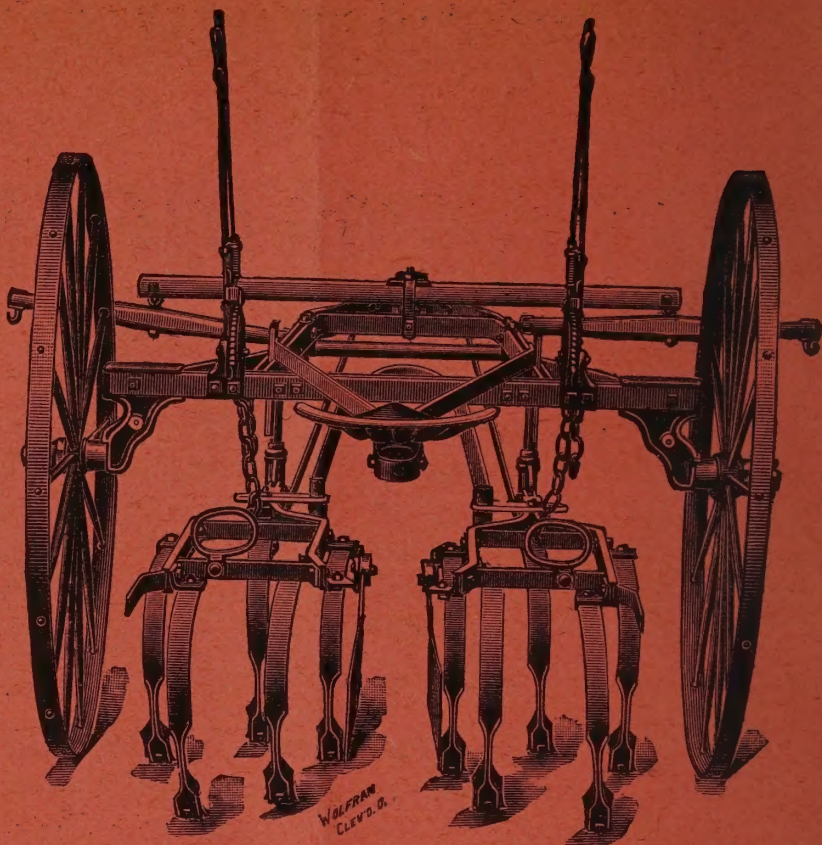


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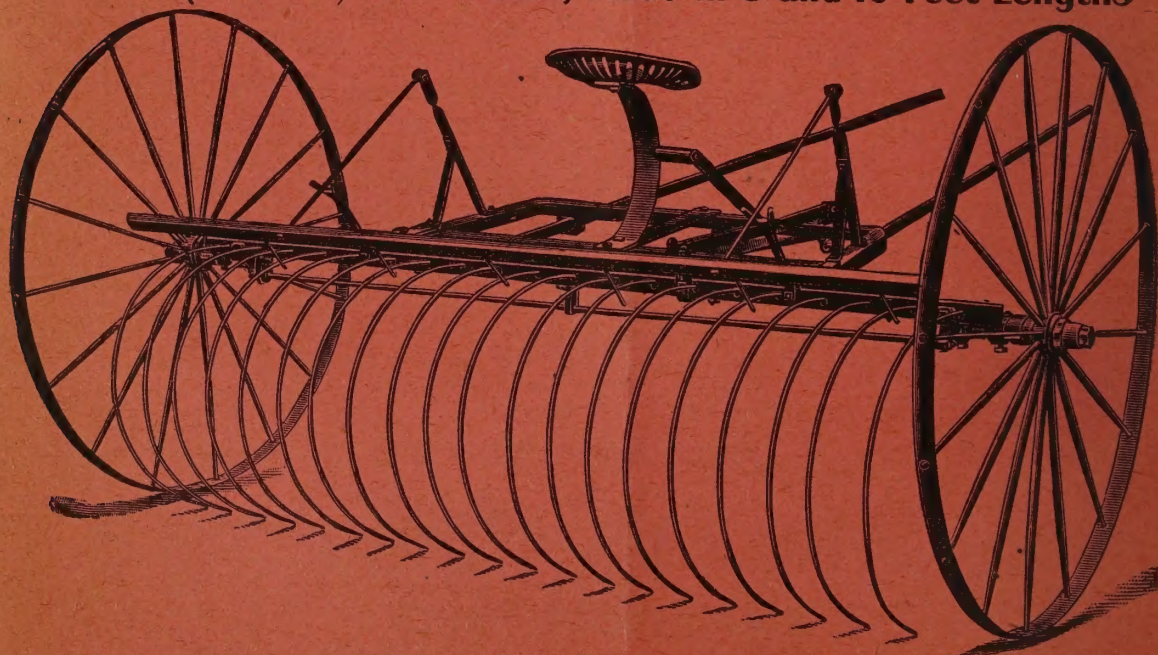
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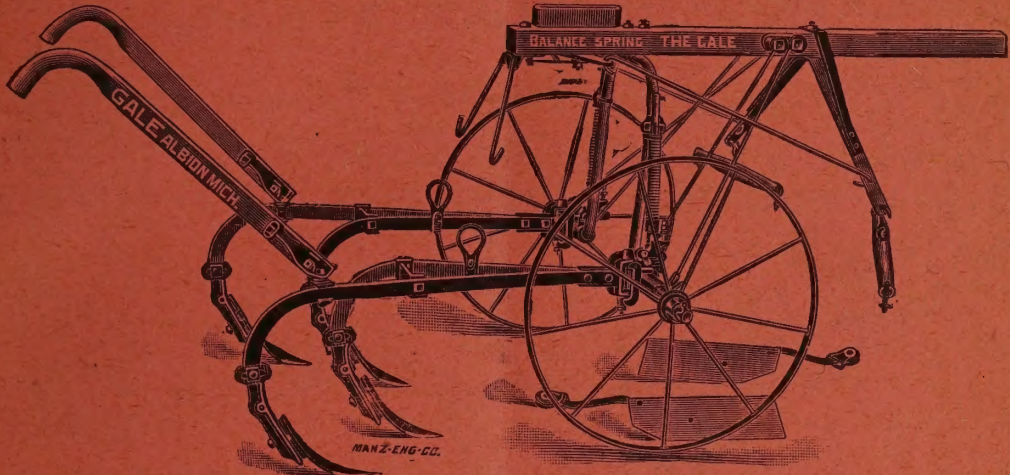


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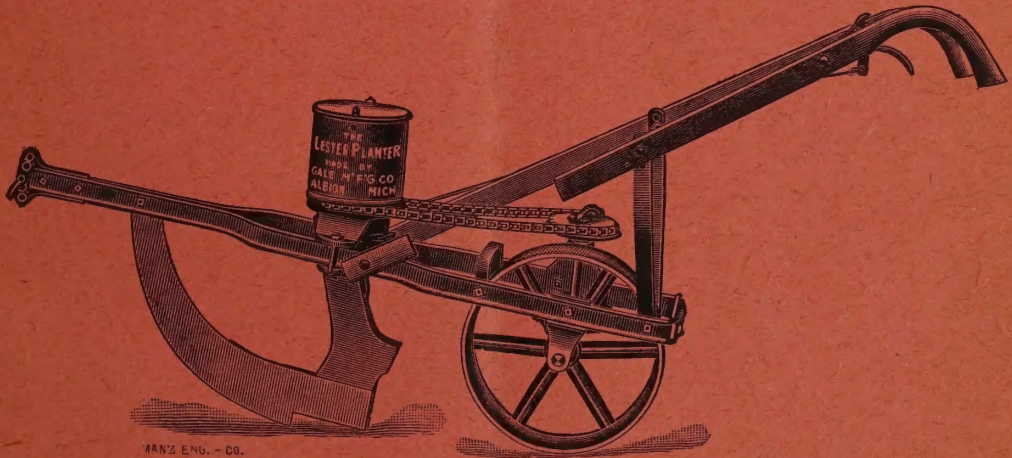
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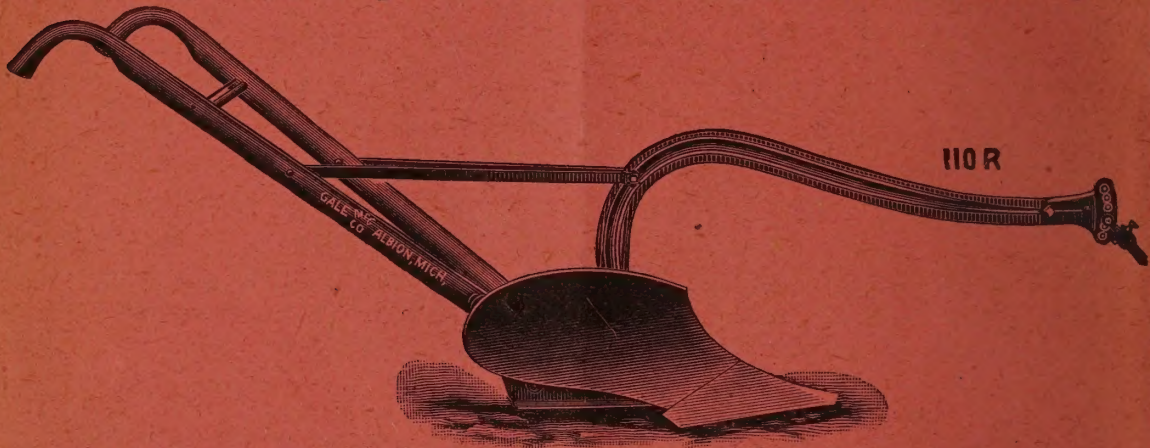
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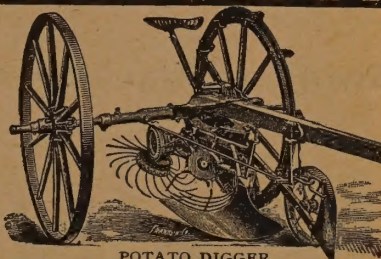
MOLINE, ILLINOIS

# POTATO MACHINERY



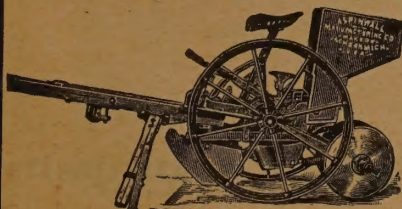
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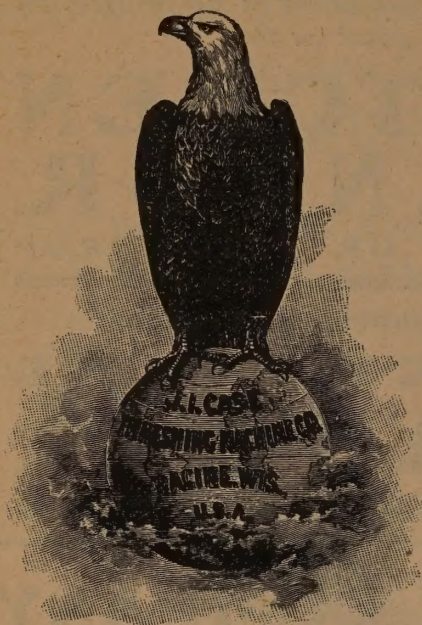
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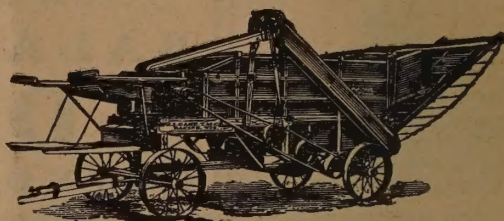
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**SAVES THE GRAIN**

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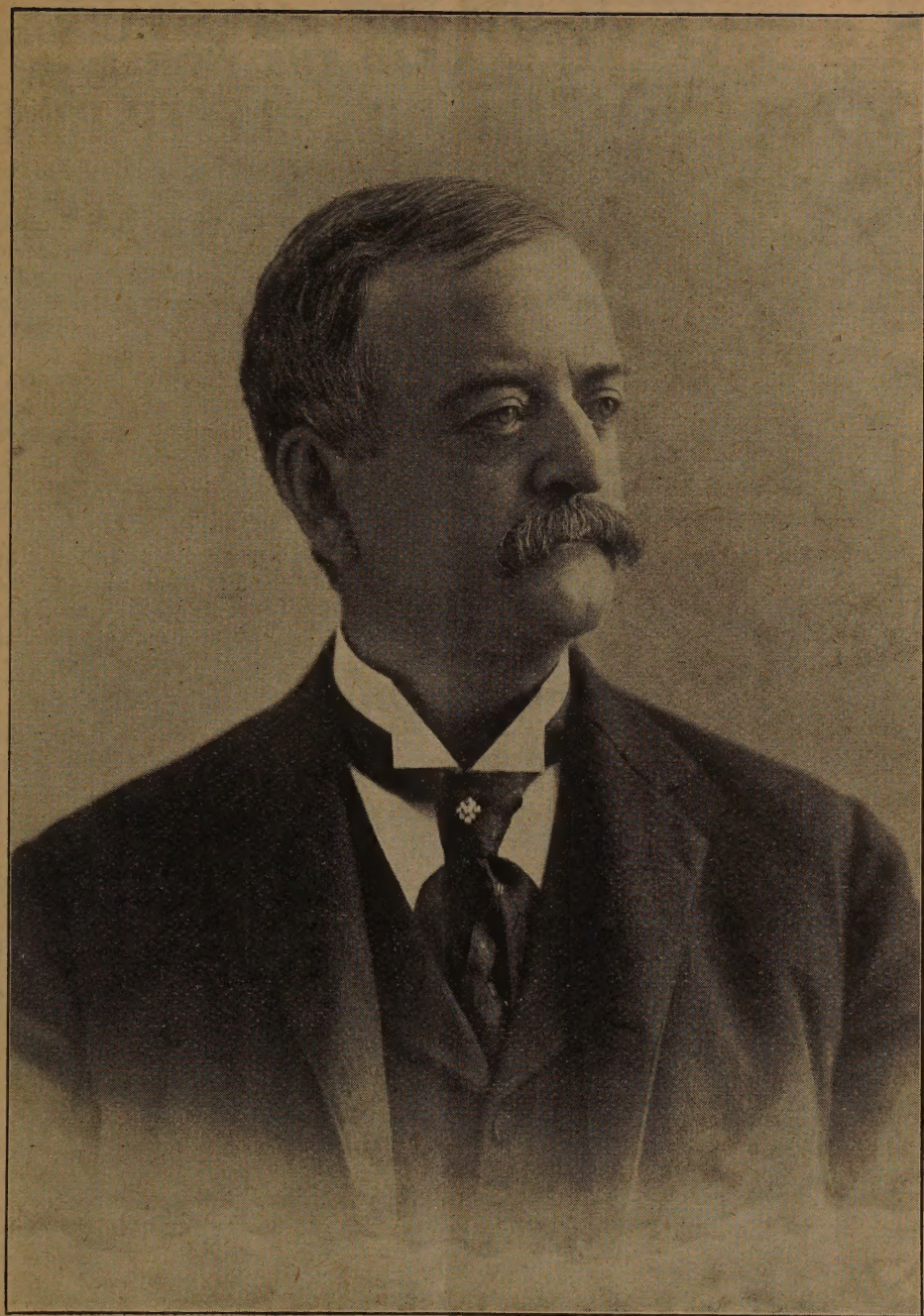
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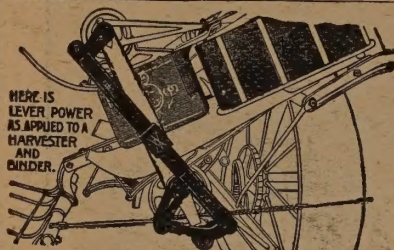


# PLANO

LIGHT RUNNING

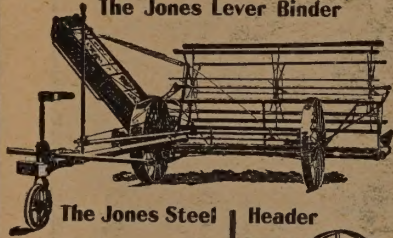
**BINDERS  
MOWERS  
REAPERS  
HEADERS  
HAY RAKES  
SICKLE GRINDERS**

**LEAD THE WORLD**

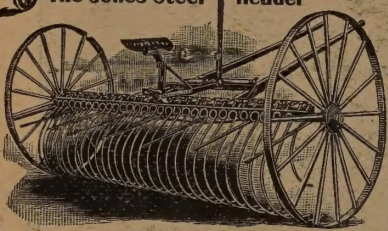


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AS APPLIED TO A  
HARVESTER  
AND  
BINDER.

**The Jones Lever Binder**



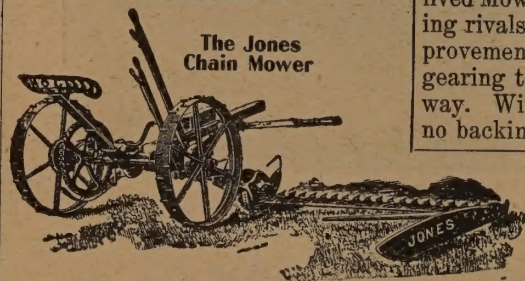
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**The Jones All-Steel Adjustable Hay Rake**



**The Plano Sickle Grinder**



**The Jones Chain Mower**

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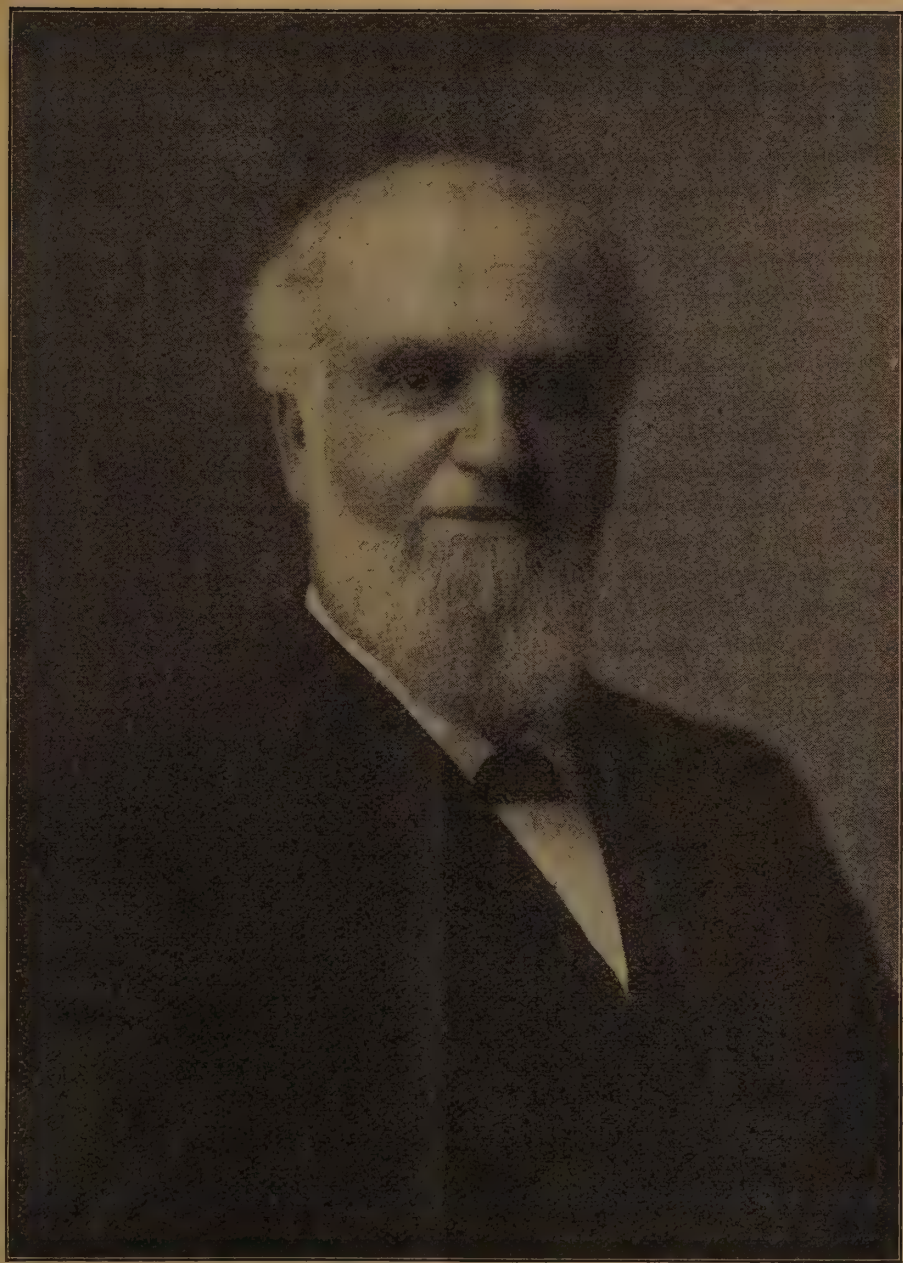
Is without doubt the simplest, lightest draft, and longest lived Mower in the world, and has vanquished all its leading rivals in hundreds of field contests. It has every improvement known to a grass-cutting machine; no nest of gearing to wear out; nothing about it to break or give way. With chain-drive, power is direct; no lost motion; no backing up to start in the grass.

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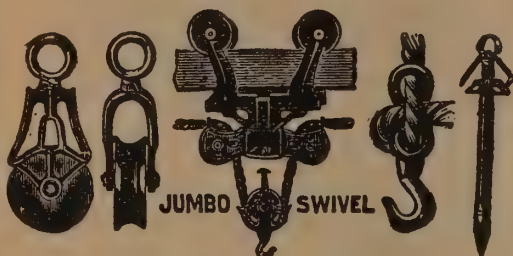


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Dealers In Flax Seed, Timothy,  
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THE ECONOMY BOLSTER SPRING  
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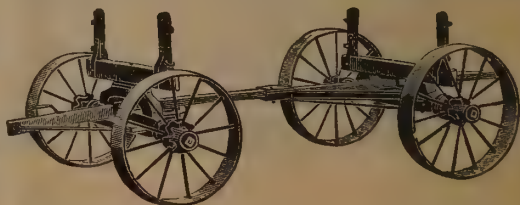


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22d Year

*ILLUSTRATED*

1879-1901

# AMERICAN FARMERS ALMANAC

A COMPILATION OF USEFUL  
AND ACCURATE INFORMATION  
FOR THE PRACTICAL FARMER

**1901**

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With the name "Perkins" on them means there are no others "just as good." They are the best. Our warranty makes this statement good. It is the original self-governing mill, and has only been imitated in an inferior way.



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## A REVOLUTION IN GRINDING MILLS

THE GEARING RUNS IN OIL.  
IS LIGHT DRAFT. HAS GREAT CAPACITY.  
BEST MILL MADE. WRITE FOR PRICES.



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Feed and Ensilage Cutter  
With its Compound Spiral Cutting and Shredding Cylinder combined.

The latest great advance in feed cutter construction. This Cylinder draws and cuts feed from both sides of the machine toward the center, thus reducing strain and friction, and throws feed from center of spout, thereby making it absolutely impossible for the machine to clog. Write us for circular, which fully describes this new cutting device, as well as for introductory prices and terms. MENTION THIS ALMANAC.

**FARMERS MFG. CO.**

100 West St.

BOX 75

Massillon, Ohio



## PREFACE.

In this year of our Lord 1901, we feel that we have more reason for congratulating our farm readers upon their increased prosperity than we have had for many years past. We have reached this conclusion after a careful consideration of statistics bearing on the subject and a study of many causes that have contributed to this happy result.

The live-stock of the country is said to be worth more than \$500,000,000, or to have made a gain of thirty-eight per cent since 1895. Staple crops are worth \$400,000,000 more, and other crops \$200,000,000, an increase of twenty-five per cent compared with the depressed values in 1894-96. Horses are much higher than four years ago, with a promise of prices continuing to rise, particularly on account of the foreign demand. Horses to the number of 50,000 have been purchased in this country during the past six months by agents of the British government for the use of forces that are policing the Transvaal and Orange Free State.

Farm realty, which had depreciated during the years of depression, has more than recovered its value, and is now estimated to be worth \$1,290,000,000 more than in 1889. As nearly as can be ascertained, the amount of mortgages on farms occupied by their owners has decreased \$300,000,000 since 1889. Rates of interest have fallen off, and many Eastern capitalists are seeking vainly throughout some of the Western states to invest in mortgages bearing five per cent interest.

The statistician of the Department of Agriculture makes predictions regarding the probable increase of the population in the United States that foreshadows a great demand for the farmer's products. In 1931 the population will be 130,000,000, and to supply the food will require 700,000,000 bushels of wheat, 3,450,000 bushels of corn, 1,250,000,000 bushels of oats, and 100,000,000 tons of hay. To produce this immense quantity of food for man and beast, under our present system, we must bring under cultivation 150,000,000 acres more land than we now work, and it is estimated that we have only 108,000,000 acres of new land that is available for farming purposes.

There is no doubt, however, that under pressure of necessity, millions of acres which are now deemed worthless would be tilled with reasonable profit. So while there will be no danger of a scarcity of food, agriculture will be one of the most profitable of industries.





Mowers  
Reapers  
Binders  
Rakes  
Corn  
Harvesters  
---and---

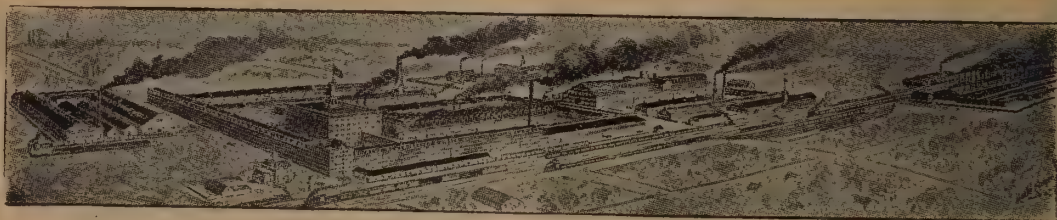
Binder=Twine

HIGHEST CLASS  
**HARVESTING MACHINES**

MANUFACTURED BY

**AULTMAN, MILLER & CO.,** AKRON, OHIO

Awarded the Gold Medal of the 1900 Paris Exposition



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The Buckeye Works is the Oldest and Best Equipped  
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with us. Send for our catalogue.



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| Mast P. P. & Co. (Drills and Cultivators)...                         | 32         |
| Mitchell, Lewis & Co. (Farm Wagons) p. 4 cover                       |            |
| Moline Plow Co. (Plows, etc.).....                                   | 1          |
| Moline Pump Co. (Pumps, etc.).....                                   | 74         |
| Monitor Mfg. Co. (Grain Drills).....                                 | p. 2 cover |
| Myers F. E. & Bro. (Pumps).....                                      | 58         |
| New Winona Mfg. Co. (Mills, Presses, etc.)..                         | 86         |
| Ohio Cultivator Co. (Cultivators, etc.)....                          | 64         |
| Olin Gas Engine Co. (Engines).....                                   | 49         |
| Perkins Windmill Co. (Mills and Tanks)...                            | 8          |
| Plano Mfg. Co. (Harvesting Machinery).....                           | 4          |
| Port Huron Engine & Thresher Co. ("Everything for Threshermen")..... | 89         |
| Quincy Corn Planter Co. (Wheels, etc.)....                           | 80         |
| Racine Economy Spring Co. (Bolster Springs)                          | 6          |
| Racine Hatcher Co. (Incubators).....                                 | 27         |
| Racine Mall & Wrought Iron Co. (Buggy Poles, etc.).....              | 56         |
| Reliable Incubator Co. (Incubators).....                             | 49         |
| Richmond Safety Gate Co. (Fences).....                               | 68         |
| Rock Island Plow Co. (Plows, etc.).....                              | 82         |
| Rosenthal Husker Co. (Corn Huskers).....                             | 82         |
| Rumely M. Co. (Engines and Threshers)...                             | 40         |
| Sechler D. M. Carriage Co. (Planters).....                           | 20         |
| Selby, Starr & Co. (Grain Drills, etc.)....                          | 52         |
| Silver Mfg. Co. (Feed Cutters, etc.).....                            | 21         |
| Snow Mfg. Co. (Wind Mills).....                                      | 51         |
| Springfield Gas Engine Co. (Engines).....                            | 50         |
| Stoddard Mfg. Co. (Full Line Agr. Imp.)...                           | 28         |
| Stover Mfg. Co. (Windmills, etc.).....                               | 20, 68     |
| Superior Drill Co. (Grain Drills).....                               | 91         |
| Tait F. B. Mfg. Co. (Corn Planters, etc.)...                         | 44         |
| Thomas Mfg. Co. (Rakes).....                                         | 68         |
| Waterloo Gas Eng. Co. (Engines).....                                 | 63         |
| Whitman Agr. Works (Hay Presses, etc.)...                            | 86         |
| Wisconsin Hay Tool Co. (Hay Carriers, etc.)                          | 6          |



## THE YEAR 1901.

### CHRONOLOGICAL CYCLES.

|                                     |    |                       |      |
|-------------------------------------|----|-----------------------|------|
| Dominical Letter .....              | F  | Solar Cycle .....     | 6    |
| Epact .....                         | 10 | Roman Indiction ..... | 14   |
| Lunar Cycle, or Golden Number ..... | 2  | Julian Period .....   | 6614 |

### CHRONOLOGICAL ERAS.

The year 5662 of the Jewish Era commences on September 14th, 1901.

Ramadhân (month of abstinence observed by the Turks) commences on December 12th, 1901.

The year 1319 of the Mohammedan Era commences on April 20th, 1901.

In Russia the "old style" is still observed, being a difference of twelve days from our reckoning of time.

### THE SEASONS.

|                        |                             |
|------------------------|-----------------------------|
| Vernal Equinox .....   | Spring begins March 20th    |
| Summer Solstice .....  | Summer begins June 21st     |
| Autumnal Equinox ..... | Autumn begins September 23d |
| Winter Solstice .....  | Winter begins December 22d  |

### ECLIPSES.

In the year 1901 there will be two eclipses of the sun, one of the moon, and a lunar appulse.

**May 3-4th.**—A lunar appulse, visible more or less to Europe, Asia, Africa, Australia, the extreme eastern tip of South America and the Indian Ocean.

**May 18th.**—A total eclipse of the sun, visible to Australia, Southern Asia, the eastern part of Africa and to the Indian Ocean; the path of totality passing through the islands of Mauritius, Sumatra, Borneo and New Guinea.

**October 27-28th.**—A partial eclipse of the moon, visible in part to the western coast of North America, Europe, Africa, and to Asia, Australia, and the North Pacific and Indian Oceans.

**November 11th.**—An annular eclipse of the sun, visible to the greater part of Europe, Asia, northern Africa, the extreme northern edge of Australia, and to the Indian Ocean; the path of annulus passing through Arabia, the Island of Ceylon, the Malay Peninsula, to the Island of Luzon.



# MORNING AND EVENING STARS.

**Mercury.**—Will be Evening Star about February 19th, June 15th, and October 12th; and Morning Star about April 4th, August 2d, and November 20th.

**Venus.**—Will be Morning Star till April 30th; and then Evening Star the rest of the year.

**Jupiter.**—Will be Morning Star till June 30th; and then Evening Star the rest of the year.

# FIXED AND MOVABLE FESTIVALS.

|                                     |              |
|-------------------------------------|--------------|
| Epiphany                            | January 6    |
| Septuagesima Sunday                 | February 3   |
| Quinquagesima (Shrove Sunday)       | February 17  |
| Ash Wednesday                       | February 20  |
| Quadragesima (First Sunday in Lent) | February 24  |
| St. David                           | March 1      |
| St. Patrick                         | March 17     |
| Annunciation (Lady Day)             | March 25     |
| Palm Sunday                         | March 31     |
| Good Friday                         | April 5      |
| Easter Sunday                       | April 7      |
| Low Sunday                          | April 14     |
| St. George                          | April 23     |
| Rogation Sunday                     | May 12       |
| Ascension Day (Holy Thursday)       | May 16       |
| Pentecost (Whit Sunday)             | May 26       |
| Trinity Sunday                      | June 2       |
| Corpus Christi                      | June 6       |
| St. John, Baptist (Midsummer Day)   | June 24      |
| St. Michael (Michaelmas Day)        | September 29 |
| St. Andrew                          | November 30  |
| First Sunday in Advent              | December 1   |
| St. Nicholas                        | December 6   |
| St. Thomas                          | December 21  |
| Christmas Day                       | December 25  |
| St. John, Evangelist                | December 27  |

# THE LONGEST DAY.

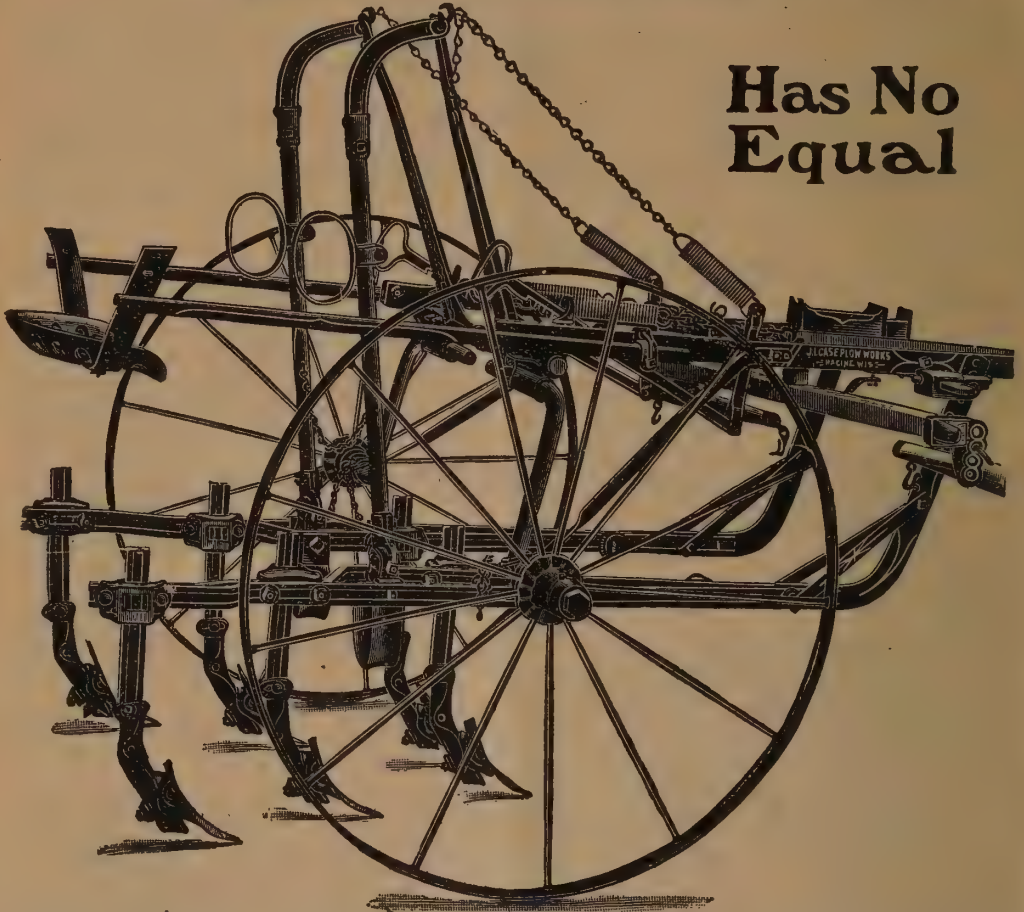
It is quite important, when speaking of the longest day in the year, to say what part of the world we are talking about, as will be seen by the following list, which tells the length of the longest day in several places.

In Stockholm it is 13½ hours in length. In Spitzbergen the longest day is 3½ months. In London and in Bremen the longest day has 16½ hours. In Hamburg and in Dantzic the longest day has 17 hours. In St. Petersburg and in Tobolsk, Siberia, the longest day is 19 hours and the shortest 5 hours. In Tornea, Finland, June 21 brings a day nearly 22 hours long, and Christmas one less than 3 hours in length. In New York the longest day is about 15 hours long and in Montreal it is 16. In Wardbury, Norway, the longest day lasts from May 21 to July 22, without interruption.



# Eclipse Cultivator

Has No  
Equal



THE BEST BALANCED, BEST WORKING  
HAMMOCK CULTIVATOR MADE

AND IS FURNISHED WITH  
ANY STYLE GANG

4 SHOVEL PLAIN OR SPRING TRIP  
6 SHOVEL PLAIN OR SPRING TRIP  
EAGLE CLAW  
SPRING TOOTH  
STEEL OR WOOD BEAM

IT WILL PAY YOU TO EXAMINE THE ECLIPSE BEFORE BUYING

SEND FOR COMPLETE CIRCULAR TO SOLE MANUFACTURERS

**J. I. CASE PLOW WORKS**  
RACINE, WISCONSIN



# THE AMERICAN FARMERS' ALMANAC.



## 1st Month JANUARY 31 Days

### MOON'S PHASES.

### NEW YORK.

### CHICAGO.

|                      |              |      |              |
|----------------------|--------------|------|--------------|
| Full Moon..... 4d.   | 7h. 13m. ev. | 4d.  | 6h. 13m. ev. |
| Last Quarter....12d  | 3h. 38m. ev. | 12d. | 2h. 38m. ev. |
| New Moon.....20d.    | 9h. 36m. mo. | 20d. | 8h. 36m. mo. |
| First Quarter...27d. | 4h. 52m. mo. | 27d. | 3h. 52m. mo. |

| Day of Year. | Day of Month. | Day of Week. | Sun Rises.<br>H. M. | Sun Sets.<br>H. M. | Moon Sets.<br>H. M. | H. W.<br>N. Y.<br>H. M. |
|--------------|---------------|--------------|---------------------|--------------------|---------------------|-------------------------|
| 1            | 1             | Tuesday      | 7 24                | 4 43               | 3 53                | 4 53                    |
| 2            | 2             | Wednes.      | 7 25                | 4 44               | 4 57                | 5 57                    |
| 3            | 3             | Thursd.      | 7 25                | 4 45               | 5 57                | 6 56                    |
| 4            | 4             | Friday       | 7 25                | 4 46               | rises               | 7 46                    |
| 5            | 5             | Saturday     | 7 25                | 4 47               | 5 52                | 8 34                    |
| 6            | 6             | <b>SUN.</b>  | 7 25                | 4 48               | 6 56                | 9 21                    |
| 7            | 7             | Monday       | 7 25                | 4 49               | 7 58                | 10 2                    |
| 8            | 8             | Tuesday      | 7 25                | 4 50               | 8 59                | 10 40                   |
| 9            | 9             | Wednes.      | 7 24                | 4 51               | 9 58                | 11 18                   |
| 10           | 10            | Thursd.      | 7 24                | 4 52               | 10 56               |                         |
| 11           | 11            | Friday       | 7 24                | 4 53               | 11 54               | 0 21                    |
| 12           | 12            | Saturday     | 7 24                | 4 54               | morn                | 1 6                     |
| 13           | 13            | <b>SUN.</b>  | 7 23                | 4 55               | 0 51                | 1 53                    |
| 14           | 14            | Monday       | 7 23                | 4 56               | 1 48                | 2 44                    |
| 15           | 15            | Tuesday      | 7 23                | 4 57               | 2 47                | 3 41                    |
| 16           | 16            | Wednes.      | 7 22                | 4 58               | 3 44                | 4 39                    |
| 17           | 17            | Thursd.      | 7 22                | 5 0                | 4 38                | 5 37                    |
| 18           | 18            | Friday       | 7 21                | 5 1                | 5 29                | 6 32                    |
| 19           | 19            | Saturday     | 7 20                | 5 2                | 6 18                | 7 23                    |
| 20           | 20            | <b>SUN.</b>  | 7 20                | 5 3                | sets                | 8 9                     |
| 21           | 21            | Monday       | 7 19                | 5 4                | 6 42                | 8 56                    |
| 22           | 22            | Tuesday      | 7 19                | 5 5                | 7 51                | 9 43                    |
| 23           | 23            | Wednes.      | 7 18                | 5 7                | 9 2                 | 10 26                   |
| 24           | 24            | Thursd.      | 7 17                | 5 8                | 10 14               | 11 10                   |
| 25           | 25            | Friday       | 7 17                | 5 9                | 11 25               |                         |
| 26           | 26            | Saturday     | 7 16                | 5 10               | morn                | 0 26                    |
| 27           | 27            | <b>SUN.</b>  | 7 15                | 5 11               | 0 35                | 1 23                    |
| 28           | 28            | Monday       | 7 14                | 5 13               | 1 43                | 2 25                    |
| 29           | 29            | Tuesday      | 7 13                | 5 14               | 2 48                | 3 33                    |
| 30           | 30            | Wednes.      | 7 13                | 5 15               | 3 49                | 4 39                    |
| 31           | 31            | Thursd.      | 7 12                | 5 16               | 4 43                | 5 44                    |

**WEATHER.**—The 1st—3d, variable; 4th—8th, clear and cold; 9th—12th, heavy snow storms; 13th—16th, cloudy and mild; 17th—22d, thawing; 23d—27th, snow and sleet; 28th—31st, clear and cold.

The sad Old Year has reigned his day;  
The young New Year seems blithe and gay,  
And o'er his head afar on high  
The star of hope shines in the sky.  
"The King is dead, long live the King!"  
Time robs each sorrow of its sting;  
Each hour of trouble ends at last,  
Each year's a mem'ry of the past.

THE kicking cow is almost invariably the result of improper handling and sometimes of downright brutality.

If you keep on taking from the soil without returning to it, it is only a question of time when your fields will become sterile and worthless.

## Diploma and Gold Medal Steel Frame & Royal Scale Rack

Awarded Chicago Scale Co. for best Stock and Hay Scales at Omaha Exposition. Official Scales Stock Pavilion, World's Fair, Chicago, 1893. Require no pit. Steel Frames, Irons for Stock Racks. Scales for all purposes. Best Quality. Lowest Prices. Warranted.

Requires  
No Pit.



No change of  
Balance.

Also at Wholesale Prices: Sewing Machines, Safes, Bicycles, Blacksmiths' Tools, Feed Mills, Corn Shellers, Engines, Boilers, Plows, Scrapers, Wire Fence, Stoves, Saddles, Harness, Buggies, Sleighs and hundreds of useful articles. Catalog free. Address CHICAGO SCALE CO., 296 Jackson Boulevard, Chicago, Ill.

# KLONDIKE CULTIVATOR

THE  
QUICK DODGER

*The Original and  
the Best*  
**Pivotal Pole  
Cultivator**  
*Quickly and Easily Turned*

Imitated as closely as our  
Patents will allow, but by no  
means equaled.

## Splendid on Side Hill

as the tendency to work  
down hill is counteracted  
by varying position of pole

## Can be Guided by Hand or Foot

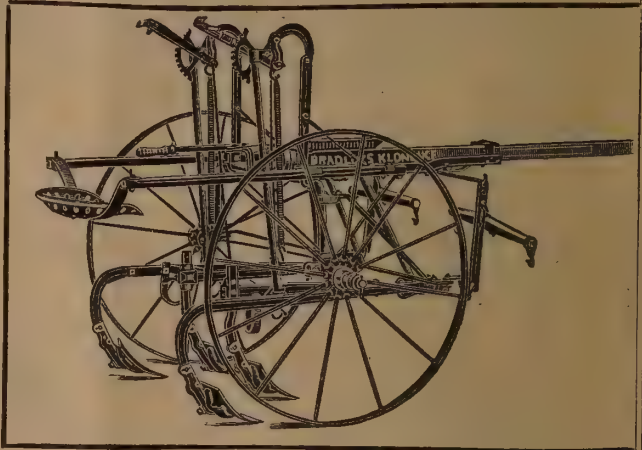
Lifting Springs hold the  
gangs up, when raised, until  
again pressed down.

The **Hammock Seat** can be raised or lowered, and can be set forward or  
backward, to balance Cultivator.

**Depth of Cultivation** can be varied by means of the small hand-levers at  
top of pipe standards.

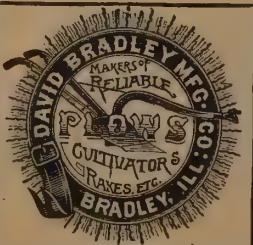
**All styles of Gangs** usually furnished can be put on this.

Send for **Our Pocket Annual**, which shows all goods made by us.



Made by **DAVID BRADLEY MFG. CO.** Bradley, Ill.

*Makers of Walking and Riding Plows, Harrows, Planters,  
Hay Presses, and other Farm Tools.*

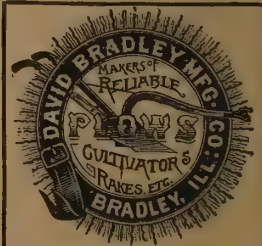


### Branch Houses:

**DAVID BRADLEY MFG. CO.**  
Council Bluffs, Iowa.

**BRADLEY, CLARK & CO.**  
Minneapolis, Minnesota.

**BRADLEY, ALDERSON & CO.**  
Kansas City, Missouri.







CANAL TOWER, AMSTERDAM.

### Government Lands.

The annual report of the commissioner of the general land office of the United States shows that 917,135,702 acres of land still remain open to settlement. 360,000,000 of this land is in Alaska.

Excluding Alaska and our possessions in the West Indies and the Pacific ocean, Uncle Sam's farm consists of 3,025,600 square miles, divided into 55,600 square miles of water and 2,970,000 square miles of land, or 1,803,476,100 acres. Arizona has a total area of 72,000,000 acres, of which 40,000,000 acres remain open to settlement. Idaho has 54,000,000, of which only 23,000,000 have been taken and 31,000,000 remain. Montana still has 57,000,000 of her 93,000,000 available for settlers; Nevada, New Mexico and others of the arid states have a corresponding quantity. Of the agricultural states nearly one-fourth of the area of Washington remains open, nearly one-fifth of Nebraska and 10 per cent of Minnesota. Oklahoma, the newest of the territories, has a smaller quantity of public land available than any of the older ones—less than one-half as much as Nebraska and only a little more than Minnesota and Arkansas.

There are large tracts of land in the southern states—1,500,000 acres in Florida, 3,500,000 in Arkansas, 500,000 in Louisiana and a similar quantity in Mississippi, which, however, is mostly swamps. In Michigan 438,000 acres are still available and in Wisconsin 313,000 acres.

The total sales of government land during the year ended June 30, 1900, were 13,453,887 acres, an increase of over 4,000,000 from the fiscal year of 1899, and the cash receipts of the land office were \$4,379,758, the largest for several years.

During the year 61,270 people took up original homestead entries, amounting to 6,478,409 acres; 3,479 people took up desert lands, amounting to 590,155 acres, while four persons filed timber claims for 640 acres, making a

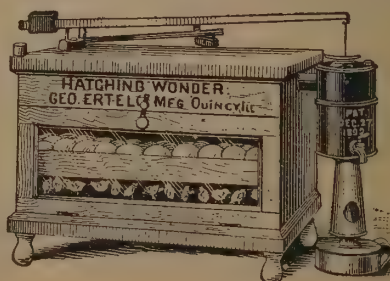
total of 64,753 new settlers upon unoccupied public land, who took up 9,069,204 acres, or an average of 140 acres each. For a year so prosperous as 1900 this seems a remarkable record.

### Profit in Buttermilk.

More attention should be given to making the buttermilk a profitable factor of the dairy business. Wherever it can be had in sufficient quantities, and fresh, it is in good demand as a summer beverage. Physicians advocate its use, and as a therapeutic agent it is given to invalids when nothing else is allowed. It is also a powerful nerve tonic. For people inclined to dyspepsia it is better than sweet milk, because one of the difficulties of milk—its slowness of digestion—is removed at once, the buttermilk having already gone through one process of digestion. Near towns of any size a good buttermilk trade could be easily established, and as a "by-product" its sale would undoubtedly yield a better net profit than the sale of sweet milk.

Good farming is a good business at any and all times, and the results are satisfactory upon the time of the farmer and his labor, while half-methods and poor farming will carry with them the appearance of bad times, no matter how high the prices are, or how good the general conditions of trade.

### HATCHING WONDERS



50-EGG  
SIZE  
**\$5.50.**  
Freight  
paid to  
your  
station.  
200 Egg  
Victors  
**\$17.00,**  
freight  
paid.  
Send 6c  
for 176-  
page  
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logue.

GEORGE ERTELS CO., 521 Kent St., Quincy, Ill.  
U. S. A.



### The Incubator a Necessity.

There is no doubt that the incubator is essential to success in the poultry business. One must study and experiment with the incubator as well as with other farm matters. The chief object of the incubator is to hatch a great quantity of eggs at once, and at any season, and not to do better work than the hen by increasing the percentage of successful eggs. It economizes space and labor, for it is manifestly much easier to watch one incubator, with its hundreds of eggs, than two or three dozen hens.

It takes time to learn to operate the best of incubators properly. Following directions will do for the beginner, but he will soon discover that he must find out from experience what is best. It is therefore better to begin slowly with the machine. Experiment with a dozen or two eggs at first, and then gradually work up to a higher number as success attends the efforts.

One thing in using the incubator is that eggs hatch out at different times, and it is wise to make a separation of the thick-shelled brown eggs from the thin-shelled white ones. Put these in a different incubator, so that more uniformity of hatching will be obtained. The thin-shelled white eggs must be kept more uniformly warm than the brown, thick-shelled eggs. The latter need more cooling and more air than the white ones, and as cooling always makes strong chickens, good results can be obtained by hatching out the brown eggs separately.

One of the things that should be looked after carefully is the regulation of the heating apparatus and the record of the same by the thermometers. It is best for a man to practice with the incubator without eggs in it until he is sure that he can control the heat. Some incubators are so carefully and thoroughly built that the outside temperature has little effect on them. There are others, however, that seem to be greatly affected by the general state of the weather. If found

that an incubator responds too quickly to outside influences, it will be necessary to place it in the cellar or some other place where the temperature is uniform, or at least changes but slowly. As to the thermometer, be sure that it is correct. There will be no gain in saving money on a cheap thermometer and losing it in a whole drawer of eggs.

### American Swine.

As in most of the improved breeds of stock, America leads the world in swine. The statistical department of the government has recently made a careful estimate of the number of hogs now living in the world, and the figures are placed at 122,376,000, of which number the United States is credited with 69,000,000, equal to 54.6 per cent of the entire world's supply. Austria-Hungary, Russia and Germany have between 10,000,000 and 11,000,000 each, France has a little over 6,000,000, the United Kingdom has nearly 3,700,000, Spain, Italy and Canada almost 2,000,000 each, Belgium and Austria a little over 1,090,000, and other countries smaller numbers.

As each citizen who improves his house and his grounds furnishes powerful incentive to the neighbors to do the same, this co-operation builds up the town; increases value of real estate; makes a good reputation for the community; keeps the inhabitants from selling out, and children from leaving the parental roof.

If you are interested in a band instrument of any kind, or would like to join a band or drum corps, you can obtain full information upon the subject from the big book of 136 pages that Lyon & Healy, Chicago, send free upon application, by mentioning this almanac. It contains upward of 1,000 illustrations, and gives the lowest prices ever quoted upon band instruments.



## SAMSON GALVANIZED STEEL WINDMILL

THE LATEST GREAT ADVANCE IN WINDMILL CONSTRUCTION



Its double gear gives double strength and durability; its detachable bearings are quickly replaced when worn out; four bearings carry the load as against one in other mills; it has wick feed oilers, center crank and innumerable advantages over all others. Ask for catalogue giving full particulars.

**STOVER MANUFACTURING CO.**

557 RIVER ST.

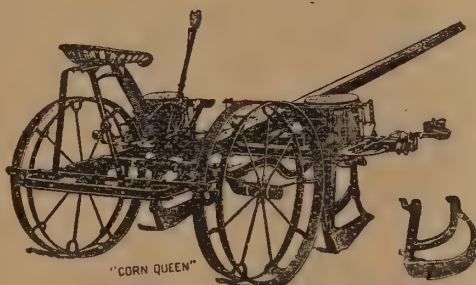
FREEPORT, ILL.

# AVERY

## Implements, Wagons

## Threshing Machinery

Are STRICTLY HIGH-GRADE, and are noted particularly for THREE things—  
DOING SPLENDID WORK : HANDLING EASILY : LASTING WELL



"CORN QUEEN"

F  
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The Vacuna. Latest and Greatest Combined.

Best Equipped of Any.

Send for our Handsome Free Catalogue.

Please state which machines are needed.

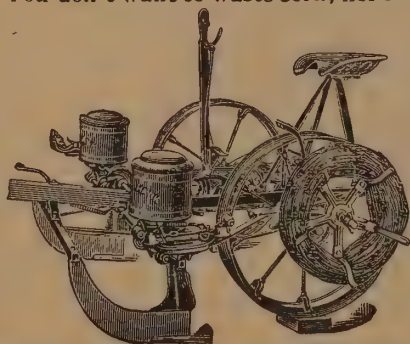
We build all styles of Cultivators.

BRANCH HOUSES IN  
PRINCIPAL CITIES

**AVERY MFG. CO.**

477 Iowa Street  
PEORIA, ILLINOIS

You don't want to waste corn, nor miss putting in enough. If you want three grains in a hill you want it **THREE IN A HILL EVERY TIME.**



## The Black Hawk Corn Planter

does it. Accurate in number of grains in a hill, and putting the hill at right place, beyond anything else yet made; quickly changed to an accurate drill when wanted.

**D. M. SECHLER CARRIAGE CO.**

WEST AVENUE, MOLINE, ILL.

make it; also the Single Corn Drill. Also the best line of *Bugles and Carriages* made in the West. Sixty years as builders.

Buy of us and get your money's worth.



# THE AMERICAN FARMERS' ALMANAC.



## 2d Month FEBRUARY 28 Days

### MOON'S PHASES.

### NEW YORK.

### CHICAGO.

|                   |      |               |      |              |
|-------------------|------|---------------|------|--------------|
| Full Moon.....    | 3d.  | 10h. 30m. mo. | 3d.  | 9h. 30m. mo. |
| Last Quarter....  | 11d. | 1h. 12m. ev.  | 11d. | 0h. 12m. ev. |
| New Moon.....     | 18d. | 9h. 45m. ev.  | 18d. | 8h. 45m. ev. |
| First Quarter.... | 25d. | 1h. 38m. ev.  | 25d. | 0h. 38m. ev. |

| Day of Year. | Day of Month. | Day of Week. | Sun Rises.<br>H. M. | Sun Sets.<br>H. M. | Moon Sets.<br>H. M. | H. W.<br>N. Y.<br>H. M. |
|--------------|---------------|--------------|---------------------|--------------------|---------------------|-------------------------|
| 32           | 1             | Friday       | 7 11                | 5 17               | 5 30                | 6 41                    |
| 33           | 2             | Saturday     | 7 10                | 5 19               | 6 9                 | 7 29                    |
| 34           | 3             | SUN.         | 7 9                 | 5 20               | rises               | 8 10                    |
| 35           | 4             | Monday       | 7 8                 | 5 21               | 6 44                | 8 52                    |
| 36           | 5             | Tuesday      | 7 7                 | 5 22               | 7 45                | 9 32                    |
| 37           | 6             | Wednes.      | 7 6                 | 5 24               | 8 44                | 10 8                    |
| 38           | 7             | Thursd.      | 7 5                 | 5 25               | 9 42                | 10 43                   |
| 39           | 8             | Friday       | 7 3                 | 5 26               | 10 40               | 11 20                   |
| 40           | 9             | Saturday     | 7 2                 | 5 27               | 11 37               |                         |
| 41           | 10            | SUN.         | 7 1                 | 5 28               | morn                | 0 25                    |
| 42           | 11            | Monday       | 7 0                 | 5 30               | 0 34                | 1 13                    |
| 43           | 12            | Tuesday      | 6 59                | 5 31               | 1 30                | 2 5                     |
| 44           | 13            | Wednes.      | 6 57                | 5 32               | 2 25                | 3 4                     |
| 45           | 14            | Thursd.      | 6 56                | 5 33               | 3 17                | 4 4                     |
| 46           | 15            | Friday       | 6 55                | 5 35               | 4 6                 | 5 7                     |
| 47           | 16            | Saturday     | 6 53                | 5 36               | 4 51                | 6 7                     |
| 48           | 17            | SUN.         | 6 52                | 5 37               | 5 32                | 7 0                     |
| 49           | 18            | Monday       | 6 51                | 5 38               | sets                | 7 46                    |
| 50           | 19            | Tuesday      | 6 49                | 5 39               | 6 42                | 8 31                    |
| 51           | 20            | Wednes.      | 6 48                | 5 41               | 7 56                | 9 20                    |
| 52           | 21            | Thursd.      | 6 46                | 5 42               | 9 10                | 10 5                    |
| 53           | 22            | Friday       | 6 45                | 5 43               | 10 23               | 10 50                   |
| 54           | 23            | Saturday     | 6 44                | 5 44               | 11 34               | 11 41                   |
| 55           | 24            | SUN.         | 6 42                | 5 45               | morn                | 0 9                     |
| 56           | 25            | Monday       | 6 41                | 5 47               | 0 41                | 1 7                     |
| 57           | 26            | Tuesday      | 6 39                | 5 48               | 1 43                | 2 11                    |
| 58           | 27            | Wednes.      | 6 38                | 5 49               | 2 39                | 3 19                    |
| 59           | 28            | Thursd.      | 6 36                | 5 50               | 3 28                | 4 24                    |
| ...          | ...           | .....        | .....               | .....              | .....               | .....                   |
| ...          | ...           | .....        | .....               | .....              | .....               | .....                   |
| ...          | ...           | .....        | .....               | .....              | .....               | .....                   |

**WEATHER.**—The 1st—4th, blizzard; 5th—9th, clear and cold; 10th—13th, variable; 14th—17th, mild and cloudy; 18th—22d, fair; 23d—28th, occasional snow flurries.

Blow hard, old north wind, at the door,  
Pile high the drifting snow;  
But there are kindly joys within  
That summer cannot know.

And our hearts grow light  
As the days grow long;  
That promise us flowers  
And the bird's old song.

**BEEs** need the most attention during the spring and early summer.

It is a great mistake not to tie up fodder shocks very tightly. A tarred rope and hook to draw up the shocks are indispensable.

## AN ACRE OF CORN

and its possibilities under the Silage system—being the theme of

### "A BOOK ON SILAGE"

By Prof. F. W. WOLL

of the University of Wisconsin. Revised and up-to-date, neatly bound into a volume of 234 pages. It embraces full information from planting to feeding the crop, and includes working plans and specifications for building all silos. Also embraces:

I—Silage Crops.

II—Silos.

III—Silage.

IV—Feeding of Silage.

V—Comparison of Silage and other Feeds.

VI—The Silo in Modern Agriculture.

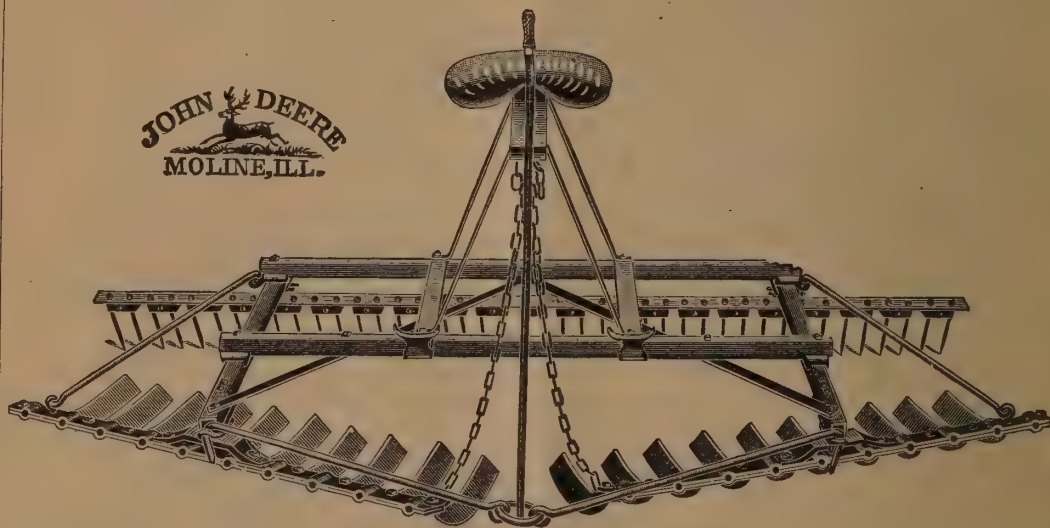
And illustrations and complete plans for round and rectangular silos, dairy barns, tables of compounded rations, etc. Mailed for 10c. coin or stamps.

**SILVER MFG. CO.**  
Salem, Ohio.

# There Comes a Time

Each Spring when you must overhaul your tools and get ready for another season's work. This Spring you will probably buy a new **PLOW**—John Deere of course—or the old spike-tooth **HARROW** will have to be replaced with a new one—*Deere* again. Perhaps it will be a **SEEDER** (Deere) or a **PLANTER** (Deere, sure), or, may be, a **CULTIVATOR** (a Deere, too). On all these tools you will find that **DEERE** stands for the **BEST**.

But when you are looking about to see what new tool will best improve your stock of machinery, you will hit upon



**JOHN DEERE**  
MOLINE, ILL.

## The Deere Clod Crusher, Pulverizer, and Leveler

Ah! that's the tool that will make your field look like a garden; will put the ground in finest condition for seeding; will insure a better germination of seed and enough more grain to pay for its cost every year, and more, too. It's a good thing, and you'd better investigate it now. Write for circular and get posted.

## DEERE & CO. :: MOLINE, ILL.

Handsome Souvenir Free if you mention American Farmers' Almanac.





THE MILK INSPECTOR OF OSTENDE, FROM LIFE.

### When a Horse Is Worth Most.

The age at which a horse is worth the most depends very largely upon his breeding and raising. In nearly all cases well-bred and well-kept horses will stand hard usage better at an early age than horses that have had a struggle for an existence and have inferior quality of blood in their veins. When a horse has been well fed and cared for from birth so as to maintain a steady growth, he ought to be well matured by the time he is five years old, and from that time until he is seven ought to be at his best. Other horses that are let run, given but little care, not fed as they should be, will make a slower growth and may not mature until seven years. A horse should be fully matured before he can be considered at his best, no matter what his breeding may be.

### A Modern Dairy.

It has been decided to conduct a model dairy throughout the entire six months of the Pan-American Exposition, which will be opened at Buffalo in the spring.

This dairy is to be composed of four or five representatives of each of the breeds of milk cows laying any claim to merit along dairy lines. Plans are being made to have eight or nine breeds represented, and nearly all of the live stock associations have given assurance of their fullest co-operation, and have generously offered to place at the disposal of the exposition the animals, which shall form this model dairy. The stable in which the cattle will be kept will be one that is equipped with the most up-to-date appliances, particularly with regard to hygienic and sanitary conditions.

It is not the plan to force these cows unduly to see how much can be produced during this time, but to see what they will do under absolutely uniform conditions, as nearly normal as it may be possible to make them on the exposition grounds. The work will be conducted by men of experi-

ence in feeding and handling dairy animals, under rules which will be formulated for the government of this dairy.

Only such changes shall be made during the six months as shall be specially calculated to prove the superiority of some particular breed, and when these changes are made with a view to establishing some characteristic of some breed, all other animals in the dairy will be placed under exactly the same conditions, and careful record kept as to their performance under these conditions. Accurate data will be kept as to the amount of food consumed, its cost, its nutritive value and also the milk product as to the amount and quality.

Never in this country has such a long-test of so many animals of different breeds been conducted, and it would seem that much valuable data could be obtained from an experiment of this kind.

### Cement Floors.

To make a cement floor, dig out five inches and fill in about four inches of this with broken stone, as in preparing for macadamizing a road. Mix the cement with sand and water, so that it will be quite thin and will run easily. Let it fill all the openings and cover all the stones; then pound solid and allow this to set. Give the whole a coating with a trowel, the same as in cementing a cistern, using one part of cement to three parts of good sand. A floor built in this manner will last indefinitely if the cement used is first-class.

## THE PROFITABLE HEN

is the one that will lay both winter and summer. **Green Cut Bone** will make her do it. It has been found by actual experience to double the eggs in every instance where used. The

### ADAM GREEN BONE CUTTER

cuts bone in the most satisfactory way. Leaves the bone in fine shavings easily consumed by chicks or mature fowls. Can't be choked by bone, meat or gristle. Cleans itself. Turns easiest because it is the only cutter made with ball bearings. Several sizes for hand and power. Catalogue No. F free. **W.J. Adam, Joliet, Ill.**





**Hon. Charles H. Deere.**

Hon. Charles H. Deere, head of the great plow manufacturing concern of Deere & Co., Moline, Ill., is one of the most prominent among the leaders in the agricultural implement industry of the United States.

Born in Vermont, in 1837, he came west in infancy, with his father, John Deere, the pioneer in the plow business in the West and the man who, more than any other, gave to the world the perfected steel plow. John Deere, with his family, first settled in Grand Detour, Ill., when the western part of the state was little more than a vast prairie, with but few settlers. Here, on the soil of Illinois, the elder Deere brought to perfection the steel plow which was to revolutionize the methods of plowing and of plow manufacture.

In 1847 John Deere removed to Moline, Ill., and established there the factory which is now conceded to be the largest in the world for the manufacture of steel plows.

Charles Deere received a liberal education in the public schools, spending also a few years at Knox College and at Bell's Business College, in the city of Chicago, and about the middle fifties he entered the business with his father, acting in various capacities as traveling salesman, accountant, and finally manager, a position which he assumed in the early sixties and has retained since. Mr. Deere is still the active manager, and head and front of the great enterprise which bears his name.

Mr. Deere's capital and business ability have been brought to bear also in other directions, and he is the moving spirit in several of Moline's largest enterprises. He is president of Deere & Mansur Co., manufacturers of Corn Planters, Disc Harrows, Seeders, Shellers, etc.; president of the Moline Water Power Co.; president of the People's Power Co.; director in the First National Bank, and intimately connected with other en-

terprises, both in and out of Moline, requiring large capital and business acumen.

For many years Mr. Deere was chairman of the Board of Labor Statistics of the state of Illinois, receiving his first appointment to that office under the administration of Governor Oglesby.

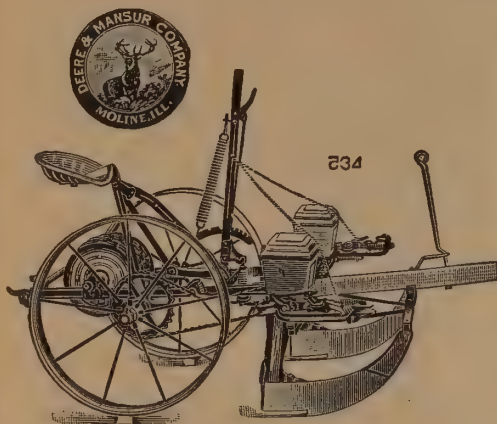
Although never seeking political preferment, Mr. Deere has always been active in the politics of his state and of the nation, having been a delegate to several of the national conventions of the Republican party, and a member of the electoral college on the Republican ticket in both the Harrison campaigns. He also served as state commissioner on the Board of the World's Columbian Exposition.

Mr. Deere has ever been essentially a man of affairs, and of large affairs, and his influence has been greatly felt in the active work of the Association of American Implement Manufacturers, and through father and through son his name is to-day as widely known throughout the Union as that of any man associated with the implement manufacturing business.

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**Weed With a Rake.**

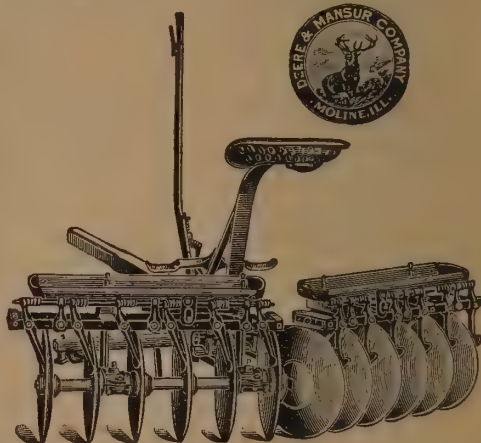
Those who do not know the superiority of the garden rake as a weeding implement should test it. The smaller the weeds, the easier they are killed. A plant is as much a weed when just in the seed-leaf as if it were large enough to be grubbed up. At this early age a slight disturbance will kill the sturdiest weed. Use a steel rake with long teeth; keep the teeth sharp, and go over all ground not occupied by crops. With an active man at the handle of the rake, weeds have no chance. Do not wait until the weeds can be seen, but anticipate them. It is, in fact, so little work to weed with the rake, if begun early enough, that the garden may be kept clean with but very little labor. Because no weeds are to be seen, do not suppose that weeding is not needed.



## No. 1 DEERE CORN PLANTER

The **Force Drop** prevents clogging of the heel, even in muddy ground. The **Spring Lift**, **Automatic Reel**, and **Adjustable Seat** will be appreciated by the operator.

When you buy a Deere Planter you know it is all right. A number of them that have been in use for from 15 to 20 years, and still doing perfect work, are sufficient proof.



## DEERE DISC HARROW

**Not the Cheapest, but the Best**

Cross Bar is Square Steel Tubing; Steel Shanks; Wood Bearing Boxes with Oil Tubes; Steel Weight Boxes; Spring to each Scraper; Plain or Cutaway Discs; Low Hitch; High Spring Seat; Long Lever.

**ALL SIZES, AND ALL RIGHT**

## OUR LINE

CORN PLANTERS  
CORN SHELLERS  
CORN HUSKERS  
AND SHREDDERS  
HORSE POWERS  
ONE-HORSE DRILLS

DISC HARROWS  
DISC CULTIVATORS  
DISC DRILLS  
SEEDERS  
STALK CUTTERS  
SULKY LISTERS

HAY RAKES  
HAY LOADERS  
POTATO PLANTERS  
COTTON PLANTERS  
BEET TOOLS  
GARDEN TOOLS, &c.

**EVERY ONE A LEADER**

CIRCULARS AND POCKET COMPANION FREE IF YOU MENTION THIS ALMANAC



MARCH.



3d Month MARCH 31 Days

MOON'S PHASES

NEW YORK.

CHICAGO.

☾ Full Moon..... 5d. 3h. 4m. mo. 5d. 2h. 4m. mo.  
 ☾ Last Quarter....13d. 8h. 6m. mo. 13d. 7h. 6m. mo.  
 ☾ New Moon .....20d. 7h. 53m. mo. 20d. 6h. 53m. mo.  
 ☾ First Quarter...26d. 11h. 39m. ev. 26d. 10h. 39m. ev.

| Day of Year. | Day of Month. | Day of Week. | Sun Rises.<br>H. M. | Sun Sets.<br>H. M. | Moon Sets.<br>H. M. | H. W.<br>N. Y.<br>H. M. |
|--------------|---------------|--------------|---------------------|--------------------|---------------------|-------------------------|
| 60           | 1             | Friday       | 6 35                | 5 51               | 4 9                 | 5 25                    |
| 61           | 2             | Saturday     | 6 33                | 5 52               | 4 45                | 6 17                    |
| 62           | 3             | SUN.         | 6 32                | 5 53               | 5 19                | 7 5                     |
| 63           | 4             | Monday       | 6 30                | 5 54               | rises               | 7 44                    |
| 64           | 5             | Tuesday      | 6 29                | 5 55               | 6 34                | 8 19                    |
| 65           | 6             | Wednes.      | 6 27                | 5 57               | 7 32                | 8 59                    |
| 66           | 7             | Thursd.      | 6 26                | 5 58               | 8 30                | 9 35                    |
| 67           | 8             | Friday       | 6 24                | 5 59               | 9 27                | 10 12                   |
| 68           | 9             | Saturday     | 6 22                | 6 0                | 10 23               | 10 48                   |
| 69           | 10            | SUN.         | 6 21                | 6 1                | 11 20               | 11 28                   |
| 70           | 11            | Monday       | 6 19                | 6 2                | morn                | —                       |
| 71           | 12            | Tuesday      | 6 17                | 6 3                | 0 14                | 0 40                    |
| 72           | 13            | Wednes.      | 6 16                | 6 4                | 1 6                 | 1 32                    |
| 73           | 14            | Thursd.      | 6 14                | 6 5                | 1 55                | 2 30                    |
| 74           | 15            | Friday       | 6 13                | 6 6                | 2 41                | 3 34                    |
| 75           | 16            | Saturday     | 6 11                | 6 8                | 3 22                | 4 35                    |
| 76           | 17            | SUN.         | 6 9                 | 6 9                | 4 0                 | 5 35                    |
| 77           | 18            | Monday       | 6 8                 | 6 10               | 4 36                | 6 31                    |
| 78           | 19            | Tuesday      | 6 6                 | 6 11               | 5 11                | 7 21                    |
| 79           | 20            | Wednes.      | 6 4                 | 6 12               | sets                | 8 7                     |
| 80           | 21            | Thursd.      | 6 3                 | 6 13               | 8 1                 | 8 55                    |
| 81           | 22            | Friday       | 6 1                 | 6 14               | 9 16                | 9 45                    |
| 82           | 23            | Saturday     | 5 59                | 6 15               | 10 27               | 10 33                   |
| 83           | 24            | SUN.         | 5 58                | 6 16               | 11 33               | 11 25                   |
| 84           | 25            | Monday       | 5 56                | 6 17               | morn                | —                       |
| 85           | 26            | Tuesday      | 5 54                | 6 18               | 0 33                | 0 53                    |
| 86           | 27            | Wednes.      | 5 53                | 6 19               | 1 25                | 1 56                    |
| 87           | 28            | Thursd.      | 5 51                | 6 20               | 2 9                 | 2 59                    |
| 88           | 29            | Friday       | 5 49                | 6 21               | 2 47                | 4 0                     |
| 89           | 30            | Saturday     | 5 48                | 6 22               | 3 20                | 4 56                    |
| 90           | 31            | SUN.         | 5 46                | 6 23               | 3 49                | 5 47                    |

WEATHER—The 1st—4th, high winds; 5th—9th, variable; 10th—13th, mild and cloudy; 14th—18th, cold winds; 19th—23d, clear and cool; 24th—26th, storms; 27th—31st, changeable.

Ah, passing few are they who speak,  
 March, stormy month, in praise of thee;  
 Yet, though thy winds are loud and bleak,  
 Thou art a welcome month to me.

For thou to northern lands again  
 The glad and glorious sun dost bring,  
 And thou hast joined the gentle train,  
 And wear'st the gentle name of Spring.

A SHORT water supply means actual loss to the farmer and stockman.

PEOPLE who burn green wood have no idea of how much water they are putting in the fire.

If you want your apple trees to bear every year thin out the fruit and never let them mature more than one third of the fruit that sets.

WHILE laying in a stock of mangel-wurzels for the cows, don't forget that they are just as good for the fowls. Slit them in halves and the fowls will do the rest.

RACINE INCUBATORS



are adapted for Farm and Home use. They are simplest, cheapest, and easiest to operate, self-regulating and self-ventilating, sure in results, and are

GUARANTEED TO SATISFY

or money refunded. We also make full line of indoor and outdoor Brooders. Prices low. 50 to 300 egg capacity. Send 2c stamp for catalogue, Poultry Pointers.

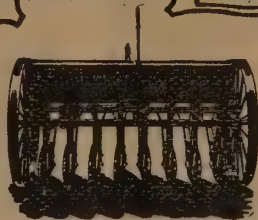
RACINE HATCHER CO., Box 10, Racine, Wis.

# TIGER LINE FARM IMPLEMENTS



*DISC PLOWS*

*DISC*



*DRILLS*



*CORN PLANTERS*



*HAY RAKES*



*HAY TEDDERS*



*CORN DRILLS*



*DISC GANG PLOWS*



*TRANSPLANTERS*



*DISC HARROWS*



M'F'D. BY  
**THE STODDARD MFG. CO.**  
DAYTON - OHIO





OPPORTUNITY MAKES THE THIEF. — CHOCARNE-MOREAU.

### Electricity on the Farm.

In previous numbers of THE FARMERS' ALMANAC we have described some of the ways in which electricity is utilized on the farm. The following sums up what has been accomplished by the application of this force to agricultural purposes:

We have already electric machines for spading, for plowing, for lifting hay, for cutting trees, for sawing, for churning, for cooking, for sheep shearing, for hauling across the farm. The electric plow is a success both in this country and in Germany. Electricity is applied to manure to increase its fertilizing properties. It is used for destroying weeds and for killing worms. Some of the Western ranches have electric currents traverse their barbed wire fences, and so make doubly sure of keeping in the cattle and keeping out thieves. There is an electric horse shoer, and an appliance to prevent a horse from running away. Arc lamps are used in market gardens to assist in getting the loads ready before break of day. It is also found that electricity aids some of the plants in the process of growth—more particularly lettuce.

The chief difficulty at present is to secure the current. It is probable that in many localities this will be obtained in connection with the town lighting plant. The physical aspect and lay of the land will decide the method that must be adopted for each locality. The electric farm has next to connect itself with the electric system of the world at large; and this will not be a matter so far in the future. In some of the agricultural sections electric roads are already in operation for the special benefit of farm produce. These roads are made to run by the farms with branches to the barns and houses.

Such a road is in operation near Toledo, Ohio. A train of trucks runs by the farmhouses, so built that they can receive farm wagons run upon them by inclined planes. The truck consists of a steel frame stoutly built,

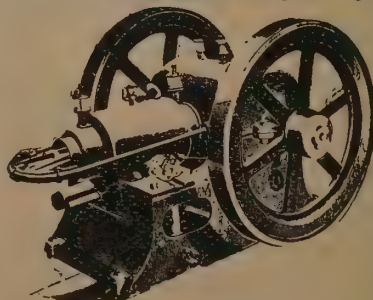
and fitted with wheels of the ordinary street railway type. In other cases trucks have been so built that they can be transformed into wagons at will, and can also be adjusted to a trolley car track. Here is an opening which is sure to be a feature of future marketing.

### Soap.

Save all the scraps and bits of broken soap and drop them into a tin can kept for that purpose; then dissolve three ounces pulverized borax in two quarts of warm water and stir all together in your can until melted. When cool it will form a jelly. A tablespoonful of this will make a strong lather in a gallon of water, and will be good for cleaning any painted surface in housecleaning time, and will remove finger prints and marks without injuring the paint, and will clean matting, oilcloth, marble, windows—in fact every and anything about a house. Whole bars of soap can be shaved fine and treated in the same way.

THE ASPINWALL MANUFACTURING Co., of Jackson, Mich., is the only concern in the world making a complete line of potato machinery. They also make lawn swings, post hole diggers, little hand sprayers and barrel churns. Write for illustrated catalogue.

### LIGHTING BALANCED GASOLINE ENGINE



New principle  
No shock  
No packing  
Greatest amount of power

Address KANSAS CITY HAY PRESS CO.  
428 Mill Street, Kansas City, Mo.



### Horse-Radish.

The consumption of horse-radish as a table relish seems to be upon the increase, and the cultivation of the crop is receiving more attention than formerly. The horse-radish is much like other root crops, as far as soil is concerned, and will do well in almost any ground except the lightest sand and the heaviest clay. If choice can be made, moist, not wet, soil should be chosen for this plant, since it there thrives best and forms roots of the finest quality and the largest size, while in the very dry situations the roots will be small and woody and will lack, to a great extent, the pungency so valued in this plant. The greater the depth of the surface stratum the better, since horse-radish is fully as deep-rooted as other root vegetables.

Any part of the root will grow, but it is found that pieces four or more inches long and a quarter of an inch or more in diameter give the best results. The longer and the thicker the set, as a rule the larger and finer the root it will produce.

Horse-radish at present prices is a profitable crop in the vicinity of cities. The usual price for the freshly shredded root in these markets is ten cents a pint without vinegar. A pint will not weigh more than about half a pound.

The following figures represent the approximate cost of raising an acre:

|                                       |         |
|---------------------------------------|---------|
| 10,000 cuttings at \$2 per 1,000..... | \$20.00 |
| 1,000 pounds fertilizer.....          | 17.50   |
| Cultivation (6 times).....            | 6.00    |
| Setting roots at 30c per 1,000...     | 3.00    |
| Rent of land.....                     | 5.00    |

Total.....\$51.50

To these figures must be added the cost of plowing, wear of tools, etc., which should make the total cost not far from \$55 an acre.

From 3,000 to 6,000 pounds of marketable root may be easily grown per acre, and these may be readily sold in bulk to bottlers at three to four, some-

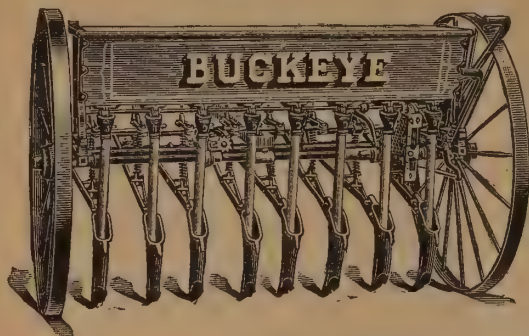
times as high as five cents per pound for number one root, and from one to two and one-half cents for number two. Under good cultivation the quantity of number one root should be at least as great as of number two. When sold in small quantities to horse-radish graters in the city markets even higher prices may be obtained. It is possible that in certain localities where the raising of horse-radish has been carried to extremes, lower prices rule, and that in sections where it is little grown higher prices may be obtained.

### Diversified Dairying.

The more general preparation of small family packages of butter and cheese, and their use in the retail trade is much to be desired. A beginning has been made in this direction, but much more is needed. For butter, a rectangular block or brick-shaped box or other package will be an improvement upon the round tub and box in several ways. Still greater opportunities exist for increasing the varieties and styles of cheese placed upon the market. Proper effort will produce as great a variety of cheese in this country as is to be found in Europe. The tendency of such variety will be to increase the use of cheese as food, and this is an object of real importance to the whole dairy interest of the country. The regulation kind of American factory cheese, usually called cheddar, formerly weighing from forty to sixty pounds per cheese, is now made in small sizes to some extent.

Cheese is the most nutritious of all foods; one pound is worth more than two of flesh meat. One kind palls on the appetite. The French have more than one hundred kinds, made to suit various tastes, and in small sizes for convenience of consumers; consequently the French use more cheese than meat. Americans will never become cheese-eaters until similar diversity is offered.

# Buckeye Drills and Cultivators

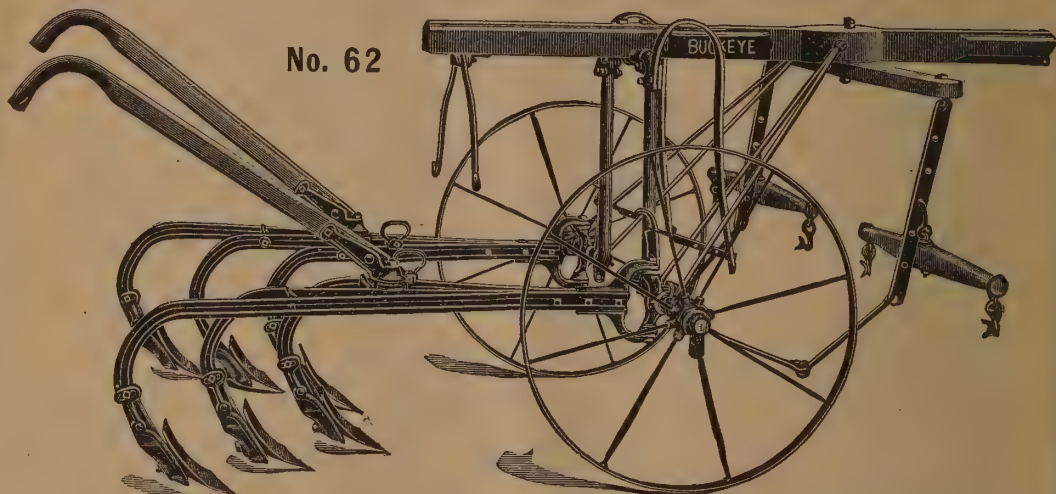


We make a full line of hoe, shoe, and disc drills, in sizes varying from 8 to 24 hoes, shoes, or discs, and spaced to suit the different localities and requirements.

The Buckeye is conceded to be the best drill on the market to-day. If you want the best, *buy the*

***Buckeye.***

*Send for complete Drill Catalogue, with Prices.*



This Cultivator is made to meet the large demand for a light Walking Cultivator, and is built on the simplest lines. The beams are solid, made of "I" beam steel, furnished with the flat lifting spring, adjustable beam hinge and coupling, pin shovels, and double or single tongue. The handles are so connected that they can be moved up or down, widened or narrowed to suit the operator. A valuable Cultivator for all kinds of cultivation. We claim the new Buckeye Cultivators, Nos. 60, 61, 62, and 63, to be the neatest in appearance and best solid beam Cultivators on the market, and no effort has been spared to make them popular. *Send for Catalogue.*

**P. P. MAST & CO.**

*1 and 2 River St. A Springfield, Ohio*



# THE AMERICAN FARMERS' ALMANAC.



## 4th Month      **APRIL**      30 Days

| MOON'S PHASES.        | NEW YORK.     | CHICAGO.           |
|-----------------------|---------------|--------------------|
| Full Moon..... 3d.    | 8h. 20m. ev.  | 3d. 7h. 20m. ev.   |
| Last Quarter.... 11d. | 10h. 57m. ev. | 11d. 9h. 57m. ev.  |
| New Moon..... 18d.    | 4h. 37m. ev.  | 18d. 3h. 37m. ev.  |
| First Quarter... 25d. | 11h. 15m. mo. | 25d. 10h. 15m. mo. |

| Day of Year. | Day of Month. | Day of Week. | Sun Rises.<br>H. M. | Sun Sets.<br>H. M. | Moon Sets.<br>H. M. | H. W.<br>N. Y.<br>H. M. |
|--------------|---------------|--------------|---------------------|--------------------|---------------------|-------------------------|
| 91           | 1             | Monday       | 5 44                | 6 24               | 4 17                | 6 33                    |
| 92           | 2             | Tuesday      | 5 43                | 6 25               | 4 43                | 7 13                    |
| 93           | 3             | Wednes.      | 5 41                | 6 26               | rises               | 7 49                    |
| 94           | 4             | Thursd.      | 5 39                | 6 27               | 7 19                | 8 24                    |
| 95           | 5             | Friday       | 5 38                | 6 28               | 8 17                | 9 4                     |
| 96           | 6             | Saturday     | 5 36                | 6 29               | 9 13                | 9 43                    |
| 97           | 7             | <b>SUN.</b>  | 5 35                | 6 30               | 10 8                | 10 21                   |
| 98           | 8             | Monday       | 5 33                | 6 32               | 11 1                | 11 1                    |
| 99           | 9             | Tuesday      | 5 31                | 6 33               | 11 50               | 11 48                   |
| 100          | 10            | Wednes.      | 5 30                | 6 34               | morn                | 0 13                    |
| 101          | 11            | Thursd.      | 5 28                | 6 35               | 0 36                | 1 6                     |
| 102          | 12            | Friday       | 5 27                | 6 36               | 1 17                | 2 2                     |
| 103          | 13            | Saturday     | 5 25                | 6 37               | 1 55                | 3 2                     |
| 104          | 14            | <b>SUN.</b>  | 5 24                | 6 38               | 2 31                | 4 3                     |
| 105          | 15            | Monday       | 5 22                | 6 39               | 3 5                 | 5 3                     |
| 106          | 16            | Tuesday      | 5 20                | 6 40               | 3 38                | 6 1                     |
| 107          | 17            | Wednes.      | 5 19                | 6 41               | 4 13                | 6 55                    |
| 108          | 18            | Thursd.      | 5 17                | 6 42               | sets                | 7 44                    |
| 109          | 19            | Friday       | 5 16                | 6 43               | 8 3                 | 8 33                    |
| 110          | 20            | Saturday     | 5 14                | 6 44               | 9 14                | 9 27                    |
| 111          | 21            | <b>SUN.</b>  | 5 13                | 6 45               | 10 19               | 10 18                   |
| 112          | 22            | Monday       | 5 11                | 6 46               | 11 16               | 11 10                   |
| 113          | 23            | Tuesday      | 5 10                | 6 47               | morn                |                         |
| 114          | 24            | Wednes.      | 5 9                 | 6 48               | 0 5                 | 0 35                    |
| 115          | 25            | Thursd.      | 5 7                 | 6 49               | 0 46                | 1 33                    |
| 116          | 26            | Friday       | 5 6                 | 6 50               | 1 21                | 2 30                    |
| 117          | 27            | Saturday     | 5 4                 | 6 51               | 1 52                | 3 25                    |
| 118          | 28            | <b>SUN.</b>  | 5 3                 | 6 52               | 2 21                | 4 18                    |
| 119          | 29            | Monday       | 5 2                 | 6 53               | 2 48                | 5 8                     |
| 120          | 30            | Tuesday      | 5 0                 | 6 54               | 3 15                | 5 54                    |
| .....        | ...           | .....        | .....               | .....              | .....               | .....                   |

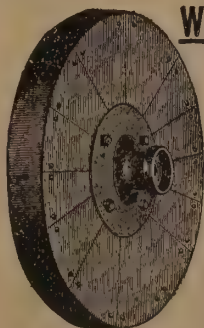
WEATHER.—The 1st—3d, cloudy and warm; 4th—8th, variable; 9th—13th, frequent showers; 14th—17th, clear and cool; 18th—22d, occasional thunder showers; 23d—26th, pleasant; 27th—30th, variable.

Now the noisy winds are still;  
April's coming up the hill!  
All the spring is in her train,  
Led by shining ranks of rain;  
Crisp old leaves astir with pride,  
Where the timid violets hide;  
All things ready with a will;  
April's coming up the hill!

WITH all stock in commencing to fatten it is best to commence gradually increasing the feed until they are given all that they will eat up clean.

BUILD your barns and other outbuildings up high from the ground and leave no rubbish piles around the buildings and you will have fewer rats to bother you.

AN orchard will be benefited by wood ashes as they supply both lime and potash, which the trees largely require for the production of both wood and fruit.



**Wide Tires Make Good Roads.**

**GOSHEN**  
LOW WAGON  
**WHEELS**

have wide tires—3½ to 6-in. Just see how it's made—layer upon layer of kiln dried *Indiana White Oak*, cut wedge shaped, grain running from hub to tire. Look how it's riveted. Look at the broad flanges with bolts running

**KELLY F'NDRY & MACH. CO.** clear through.  
90 Purl St. Goshen, Ind. Circulars &c. free.

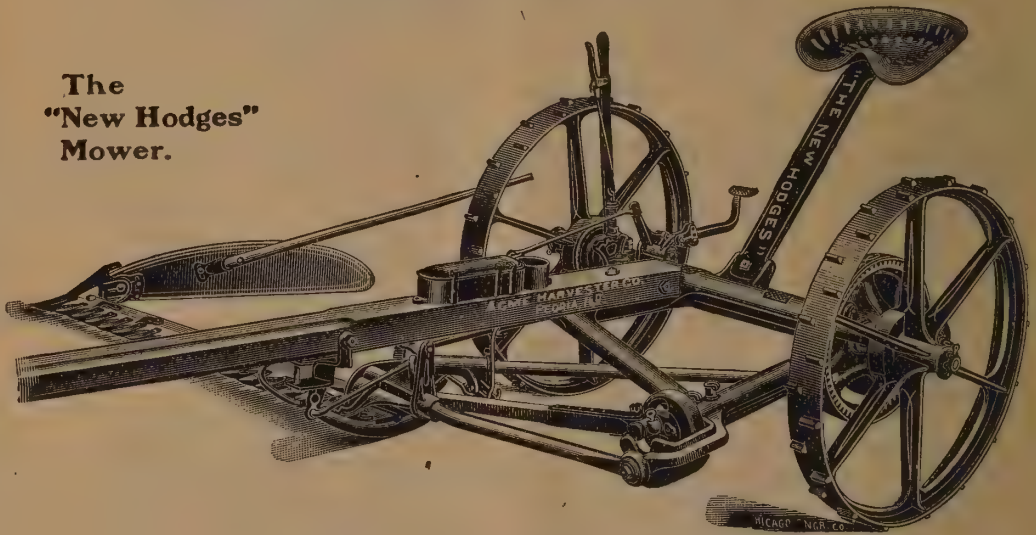
# PLANTING THISTLES

You wouldn't plant thistles if you knew it; you know you would surely feel the result of your folly.

Buying some kinds of Farm Machinery can be likened to planting thistles. In fact, it means more; time lost, money lost in a poor machine, oftentimes a crop wasted.

When it comes to buying an *Acme* or *Hodges* machine it's not like planting thistles; 41 years have proven they are what we claim they are—do the work you buy them to do.

The  
"New Hodges"  
Mower.



## THE HODGES LINE

Hodges Chain Drive Header.  
Hodges No. 2 Single Gear Header.  
Harvester King Combined Header and Binder  
Hodges Queen Binder  
Craver Cog Gear Header.  
Craver Chain Drive Header.  
"New Hodges" Mower.  
Hodges Pony Mower.

Hodges Lassie Self-Dump Rake.  
Hodges Improved Alfalfa Rake.  
Hodges Laddie Hand-Dump Rake.  
Acme Stacker.  
Hodges No. 2 Stacker  
Monarch Sweep Rake.  
Hodges Power Lift Sweep Rake.  
Acme Sweep Rake  
Acme Stack Cover Chains.

*Branch Houses and Agencies Everywhere.  
Send for Series of "Farm Helps."*

**ACME HARVESTER CO.**  
**PEORIA, ILLINOIS**





CHUMS.

W. SCHWAR.

### American Dairies.

According to the statements of the Dairy Commissioner of Massachusetts the animal value of the dairy products of the nation is, in round figures, \$500,000,000. In the forty years previous to the census of 1880 the population had increased 174 per cent, but the number of milch cows had increased but 166 per cent. In the East, the old dairy centre, the increase in milch cows was but 50 per cent, while in the north central division the increase was 700 per cent. In the Dakotas the increase in thirty years was 1,050 per cent.

The production of butter has increased more rapidly than the increase in population. The census of 1850 reported 13.51 pounds per capita, and the census of 1890 19.24 pounds. One-half of the butter production is in seven states. The largest butter state is Iowa, making 10.4 per cent of the country's production; next comes New York, with 9.3 per cent, and Pennsylvania third with 8 per cent. This large increase of production shows the importance of a foreign outlet to prevent the surplus from unduly depressing the home market. Exports during the last ten years have fluctuated between 6,000,000 pounds and 31,000,000 pounds. For the year ending June 30, 1899, the amount was 20,000,000 pounds.

The production of milk for consumption is the second largest branch of the industry, using the product of 5,500,000 cows. The production of sale milk has received less attention than its magnitude warrants. Being a perishable product, and often marketed in small quantities, statistics have been hard to gather. In Boston, with a population of three-fourths of a million people, the large wholesalers brought into the city in the year 1899 95,000,000 cu. rts. Estimating the amount from other sources at 25,000,000, we have 120,000,000 quarts. The farmers netted on an average at least 2½ cents per quart, which makes the

business to them worth \$3,000,000. In New York, with twice the population of Boston, figures based upon the amount required to furnish the sale of milk, cream and condensed milk used in the city are placed at 584,000,000 quarts per year. At 2½ cents per quart, this amounts to \$14,600,000.

### Lighter Shoes for Horses.

It has been proven beyond dispute that the average horse is shod with too heavy shoes, and if lighter ones were substituted the animal could do more work with less weariness. Heavy shoes have no particular advantage except for large truck horses on stone roads, where shoes wear out quickly. Even in such cases it is doubtful if too heavy shoes prove of any value. Certainly for farm horses light shoes are much more satisfactory. The effects of such a change are quite noticeable shortly after they are put on, and in a year's time the extra amount of work that is obtained from a horse will more than pay for the shorter time that light shoes may wear.

The main object of the shoe is to protect the hoof, and the lighter it can be made and serve its purpose the better it is for the horse. A good part of the year horses on the farm would be better off without shoes, and they can do plowing and similar work in soft fields without in any way injuring the feet. In winter when the ground is frozen it is quite different and shoes seem necessary at this time. A horse weighing 1100 pounds should generally be shod with shoes not weighing more than twelve to fifteen ounces each. If four ounces are added to each shoe, the total difference in the animal's shoes is sixteen ounces. In plowing, cultivating, mowing and reaping a farm horse will walk from ten to twenty miles a day. If it takes about four feet each step the horse will lift about half a pound extra on its two feet or six hundred pounds to every mile.



### Preserving Eggs.

Preserving eggs by the use of water glass seems now more satisfactory than any other method yet discovered. Of twenty methods of preserving eggs, tested in Germany, the three which proved most effective were coating the eggs with vaseline, preserving them in limewater and preserving them in water glass. The conclusion was reached that the last is preferable, because varnishing the eggs with vaseline takes considerable time, and treating them with limewater is likely to give the eggs a disagreeable odor and taste. There is, however, one drawback with eggs preserved in a solution of water glass, viz.: that the shell easily bursts in boiling water. This may be avoided by cautiously piercing the shell with a strong needle.

The following are directions for preserving by this method:

Use pure water that has been thoroughly boiled and then cooled. To each ten quarts of water add one quart of water glass. Pack the eggs in a jar and pour solution over them, covering well.

Keep the eggs in a cool, dark place. A dry, cool cellar is a good place.

If the eggs are kept in too warm a place the silicate is deposited and the eggs are not properly protected. Do not wash the eggs before packing, for by so doing you will injure their keeping quality, probably by dissolving the mucilaginous coating on the outside of the shell.

For packing, use only perfectly fresh eggs, for stale eggs will not be saved, and may prove harmful to the others.

If wooden kegs or barrels are to be used in which to pack the eggs, they should first be thoroughly scalded with boiling water, to sweeten and purify them.

At the North Dakota Experiment Station it was found that a 10 per cent solution of water glass preserves eggs so effectually that at the end of three and one-half months eggs that were preserved the first part of August

still appeared to be perfectly fresh. In most packed eggs, after a little time the yolk settles to one side, and the egg is then inferior in quality. In eggs preserved for three and one-half months in water glass the yolk retained its normal position in the egg, and in taste they were not to be distinguished from fresh, unpacked store eggs, and they were equal to them in beating for frosting.

Water glass is a cheap product, silicate of sodium, and may be procured at any good city drug store; or, if ordered from your country druggist, he can easily furnish it in a few days.

### Texas Stock.

It is said that in some portions of northern Texas a farmer who harbors a poor breed of hogs or cattle loses his social standing with his neighbors. They claim he injures the reputation of the neighbors with livestock buyers, and to that extent is an enemy of his neighborhood. It is the boast of some neighborhoods that in ten miles square not one man can be found raising common hogs, cattle or horses. North Texas is fast becoming famous for fine stock.

### Waterproof Whitewash.

A waterproof whitewash is in use in Germany. The powder from three parts silicious rock (quartz), three parts broken marble and sandstone, two parts of burned porcelain clay and two parts freshly slacked lime, still warm, are mixed together. This forms a silicate, if often wetted, and becomes after a while almost like stone. It is applied quite thickly to a wall or other surface, and allowed to dry one day. The next day it is covered thickly with water, which makes it waterproof.

Any plan which means the paying out of a dollar for food for family or stock, which might be grown on the farm, is a weak spot in the foundation of your farming.

# TRIED AND TRUE!

ACTIVE AT ALL TIMES, IT STANDS AT THE HEAD OF ALL OTHERS



## THE Star Windmill

*All Kinds and Sizes*

Galvanized Steel or Wood, with Ball Bearings. Adapted for Farm, Power, Residence or Irrigating Purposes.

### GRIND FEED FOR YOUR STOCK

Buy a "Star" Power Windmill. Grinds any kind of grain for stock or table use.

*Ornamental  
Outfits  
a  
Specialty*



### "Hoosier" & "Fast Mail" IRON PUMPS

Designed for every purpose, to be operated by hand or windmills.

**TANKS**—Any Capacity, Any Purpose. White Pine, Cypress, Fir, or Galvanized Steel.

**BRASS TUBE CYLINDERS  
AND WORKING BARRELS**

**Hydraulic Well Machinery**

***Largest Factory in America***

FOR THIS CLASS OF GOODS

Catalogue, Price Lists, and full particulars on application.

ADDRESS THE MANUFACTURERS

# FLINT & WALLING MFG. CO.

BOX 500

KENDALLVILLE, :: INDIANA



Power Mill Outfit





5th Month **MAY** 31 Days

| MOON'S PHASES.     |      | NEW YORK.    |                    | CHICAGO. |  |
|--------------------|------|--------------|--------------------|----------|--|
| Full Moon.....     | 3d   | rh. 19m. ev. | 3d. oh. 19m. ev.   |          |  |
| Last Quarter.....  | 11d. | gh. 38m. mo. | 11d. 8h. 38m. mo.  |          |  |
| New Moon.....      | 18d. | oh. 37m. mo. | 17d. 11h. 37m. ev. |          |  |
| First Quarter..... | 25d. | oh. 39m. mo. | 24d. 11h. 39m. ev. |          |  |

| Day of Year. | Day of Month. | Day of Week. | Sun Rises.<br>H. M. | Sun Sets.<br>H. M. | Moon Sets.<br>H. M. | H. W.<br>N. Y. |
|--------------|---------------|--------------|---------------------|--------------------|---------------------|----------------|
| 121          | 1             | Wednes.      | 4 59                | 6 55               | 3 43                | 6 38           |
| 122          | 2             | Thursd.      | 4 58                | 6 56               | 4 13                | 7 18           |
| 123          | 3             | Friday       | 4 57                | 6 57               | rises               | 7 56           |
| 124          | 4             | Saturday     | 4 55                | 6 58               | 8 4                 | 8 35           |
| 125          | 5             | SUN.         | 4 54                | 7 0                | 8 57                | 9 18           |
| 126          | 6             | Monday       | 4 53                | 7 1                | 9 47                | 10 0           |
| 127          | 7             | Tuesday      | 4 52                | 7 2                | 10 33               | 10 40          |
| 128          | 8             | Wednes.      | 4 51                | 7 3                | 11 16               | 11 25          |
| 129          | 9             | Thursd.      | 4 49                | 7 4                | 11 55               |                |
| 130          | 10            | Friday       | 4 48                | 7 5                | morn                | 0 40           |
| 131          | 11            | Saturday     | 4 47                | 7 6                | 0 30                | 1 33           |
| 132          | 12            | SUN.         | 4 46                | 7 7                | 1 3                 | 2 31           |
| 133          | 13            | Monday       | 4 45                | 7 8                | 1 36                | 3 31           |
| 134          | 14            | Tuesday      | 4 44                | 7 9                | 2 10                | 4 31           |
| 135          | 15            | Wednes.      | 4 43                | 7 10               | 2 45                | 5 32           |
| 136          | 16            | Thursd.      | 4 42                | 7 11               | 3 23                | 6 31           |
| 137          | 17            | Friday       | 4 41                | 7 11               | 4 7                 | 7 25           |
| 138          | 18            | Saturday     | 4 40                | 7 12               | sets                | 8 17           |
| 139          | 19            | SUN.         | 4 40                | 7 13               | 9 0                 | 9 11           |
| 140          | 20            | Monday       | 4 39                | 7 14               | 9 55                | 10 3           |
| 141          | 21            | Tuesday      | 4 38                | 7 15               | 10 41               | 10 52          |
| 142          | 22            | Wednes.      | 4 37                | 7 16               | 11 20               | 11 43          |
| 143          | 23            | Thursd.      | 4 36                | 7 17               | 11 53               | 0 10           |
| 144          | 24            | Friday       | 4 36                | 7 18               | morn                | 1 1            |
| 145          | 25            | Saturday     | 4 35                | 7 19               | 0 23                | 1 51           |
| 146          | 26            | SUN.         | 4 34                | 7 19               | 0 51                | 2 43           |
| 147          | 27            | Monday       | 4 34                | 7 20               | 1 18                | 3 34           |
| 148          | 28            | Tuesday      | 4 33                | 7 21               | 1 46                | 4 25           |
| 149          | 29            | Wednes.      | 4 32                | 7 22               | 2 14                | 5 13           |
| 150          | 30            | Thursd.      | 4 32                | 7 23               | 2 45                | 6 2            |
| 151          | 31            | Friday       | 4 31                | 7 23               | 3 19                | 6 48           |

WEATHER.—1st—5th, warm and clear; 6th—9th, occasional showers; 10th—14th, warm; 15th—20th, variable; 21st—26th, mild and cloudy; 27th—31st, balmy.

As the tender leaves look shyly  
From the boughs that long were bare,  
Whose dead foliage rustled dryly,  
Withered hopes, still clinging there;  
Southern winds again are breathing  
Soft reminders of the charm  
That is blossoming and wreathing  
Over every tidy farm.

THE most profitable pork is that which is made in the shortest time.

SYSTEM and order pay as well on the farm as they do in a bank or in the army.

It is useless to demand high prices for low grade products. It takes two to make a bargain.

DISEASE may lurk in that old well that has not been cleaned out for several years. Better attend to it.

It is easier to gather corn from standing stalks in October than to pick it out of the mud in December.

Is the straw handy for bedding? If not, get it there. Rotting stacks and bedless live stock are a bad combination.



**STOP THAT HORSE.**

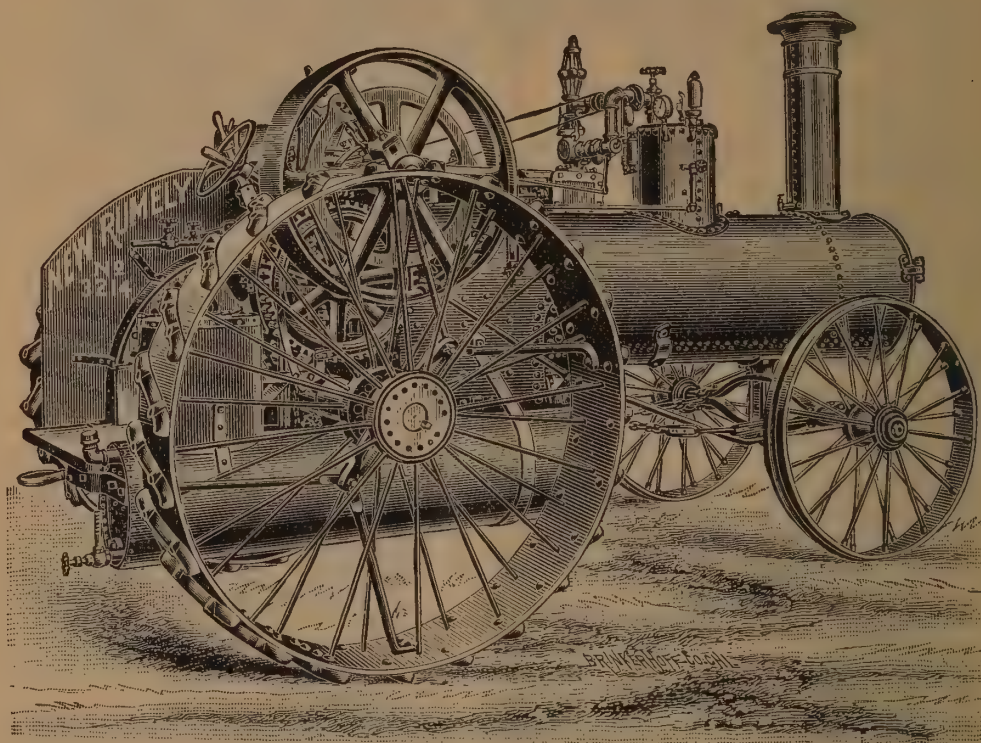
The Imperial Driving Bit  
Cures *Tongue Lolling*, prevents side-pulling and with it a lady can drive the most vicious and unmanageable horse.

Satisfaction  
Guaranteed.

Sample sent to any address, post-paid, on receipt of price: In Fine Nickel Plate, \$2.00; in Fine X. C. Plate or Japan, \$1.00. **IMPERIAL BIT AND SNAP CO.**, 1360 Clark St., Racine, Wis., U. S. A.

# RUMELY Traction Engines

SEPARATORS AND  
ATTACHMENTS.....



MANUFACTURED BY

## M. RUMELY COMPANY

*La Porte, Indiana*



ILLUSTRATED CATALOGUE MAILED FREE





BRETONNE DANCE.

T. L. DEYROLLE

### Care of Poultry.

The most important factor for handling hens on the farm is the house for their accommodation. Winter laid eggs pay best, and to assure them the hen must be protected from the cold, because the food she consumes must go to sustain life first, heat second, fat and eggs the last consideration. Hence the necessity for closely built, well-lighted and roomy houses. There are days during the winter and early spring season when poultry are better off if confined to the house; therefore let the houses be built as large as possible—not less than 8x10 feet floor space for each fifteen head of grown stock. Eight by twelve feet is a better size, as this gives room for straw, leaves or other litter. A few handfuls of wheat or millet seed scattered among the litter will keep the fowls busy and contented.

The house must be well lighted, to let in the sun's rays for warmth and light, for if left to themselves the hens will prefer to stay in the bleak outside rather than in a dark and gloomy house. The henhouse cannot be built too tight. If plastered or lined with tarred felt, it is that much better. Plenty of fresh air will reach the inside through the cracks in the doors and windows.

Next to the proper housing comes the secret of all success, cleanliness. Don't think for a moment that cleaning out in the fall and spring will do. The hen house must be kept just as clean as the cow barn or stable. The same attention should be given to the nest box as to milk pan or crock. The henhouse and roost should be as free from vermin as our bed or bedchamber.

Fresh earth under the roost is a perfect deodorizer, and will not fly like lime. The earth is pleasanter to handle, and can be secured at no expense. When the earth and droppings are cleaned up they should be kept from sunshine and rain, under shelter or in barrels, until needed for deposit

upon the land. Whitewash is generally for the interior of the henhouse, but some poultry-growers recommend the use of crude petroleum for coating the walls and ceilings twice a year, with a weekly application of lice killer upon roosts and nest boxes.

In winter it is a good plan to give the laying hens a warm breakfast. Cook the scraps from the table with the parings of the vegetables until soft. If the quantity is not sufficient, add cornmeal bran and sweet milk. Feed warm, not hot, and have ready as soon as they fly down from the roost. The tops of turnips, beets and mangels are greedily eaten when too many are not given at one time and they are fresh.

In summer the best way to supply green food for fowls that are confined in yards, is to have two yards for each flock. In one of them may be grown any kind of green food, such as oats, rye, wheat, corn, mustard, millet, etc. Such foods need not be grown more than a few inches high. Turn the fowls on the green food, and then sow the other plot, so as to permit it to grow during the time the hens are consuming the green food on the first plot. In this manner a large amount of green food can be provided at a small cost.

Every farm should be furnished with platform scales, not only to weigh the stuff to be marketed, but to watch the growth of stock, and the amount of hay, corn and other rations stored and fed. In marketing, the farmer who has no scales of his own is at the mercy of the man to whom he sells. Little can be done by way of experimental feeding without scales to gauge the amount of feed consumed and the amount of gain in the animals.

In the course of a year the lady of the house has to plan for 1,095 meals. Her work is much easier when an abundance of garden vegetables is provided by the man of the house.



Artificial Manures and Their Application.

| Manures.                     | Applied to                          | Weight per Acre.  |
|------------------------------|-------------------------------------|-------------------|
| Guano .....                  | All Crops .....                     | 1 to 3 cwt.       |
| Superphosphate of Lime ..... | Turnips, Barley, Oats .....         | 3 to 5 cwt.       |
| Common Salt .....            | Grain and Wurzel .....              | 1 to 2 cwt.       |
| Soot .....                   | Grain and Potatoes .....            | 30 to 40 bushels. |
| Sulphate of Ammonia .....    | Grain Crops, with Common Salt ..... | 1 to 1½ cwt.      |
| Nitrate of Soda .....        | Grain Crops, with Common Salt ..... | 1 to 1½ cwt.      |
| Gypsum .....                 | Clover, Potatoes, etc. ....         | 10 to 20 cwt.     |
| Rape Cake .....              | Grain Crops, etc. ....              | 6 to 8 cwt.       |
| Bone Dust .....              | Turnips, Grass Lands .....          | 12 to 16 bushels. |

Care of Hay.

Thousands of tons of hay are rendered unfit for market every year through improper care in either housing or stacking. It is not alone necessary that hay should be cut at the right time, but enough force should be employed to push harvesting operations to a successful and satisfactory conclusion. Hay that is in the least discolored cannot be classed as first-class, no matter what its nutritive qualities may be. It is a matter of fact, of course, that prearrangements made relative to the ingathering of the hay crop very often fall far short from being ultimately carried out, and also that there is an element of uncertainty to be considered regarding the weather conditions that very often makes life a burden to the most of farmers. But too often is carelessness, neglect and indifference the main cause for the poor condition of the hay harvested.

Hay should never be baled as soon as it is saved, no matter how dry it may feel. It is sure to go through a sweat later, and if baled too soon the middle of the bales are sure to become musty, if they do not actually decay. The better plan is to haul the hay to a barn or shed, and allow it to remain there loose a month or six weeks, or until the room is needed for other purposes. If shed room is not available then, it should be stacked a month or more, but should be baled before the fall rains injure the outside.

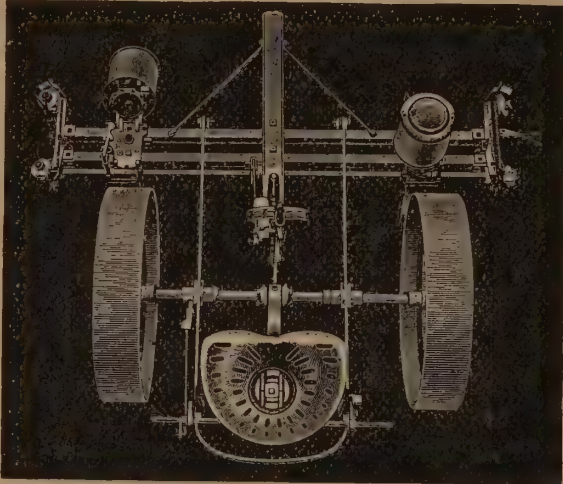
Burning Orchard Brush.

Many a good orchard has been rendered largely unproductive from year to year because the owner did not keep the old dead trees and limbs cleaned up. A good fire of orchard brush once a year will have a wonderful effect in protecting the fruit trees from insect and fungous diseases, and this will be especially the case if the orchard be at a considerable distance from other orchards.

In human diseases of a contagious nature it has been found that the greatest barrier to their advancement is cleanliness in all surroundings, and the same is true in the orchard. If the work is not done in the fall, before the leaves fall, the dead limbs should be cut off in the spring and burned, together with all the dead wood that has fallen in the orchard during the winter. The orchard should be more carefully raked over than the lawn, for the reason that some of the orchard pests live over on the branches, even on those that have fallen. This gathered brush should not even go to the wood pile if the latter is near the orchard.

The Department of Agriculture is responsible for the statement that the United States grows 54.6 per cent of all the hogs in the world, to-wit, 69,000,000. If the world wants more hogs we can easily supply the demand. We can double our output, and if that is not enough we can double that.

# The Best Goods From Tait



## THE "New Decatur" Corn Planter

The Best Corn Raiser on earth. Has the Best Self-winding Reel. Has the only perfect Marker Rope Transfer.

If you are a farmer you should have it. If you are a dealer you should handle it.

The "NEW DECATUR" Planter (Top view) All Steel and Iron Except Tongue. Made with Flat, Concave or Open Wheels. Planter Box tips forward so that seed plates can be changed without taking corn out of boxes.

**Strong, Compact Frame.**

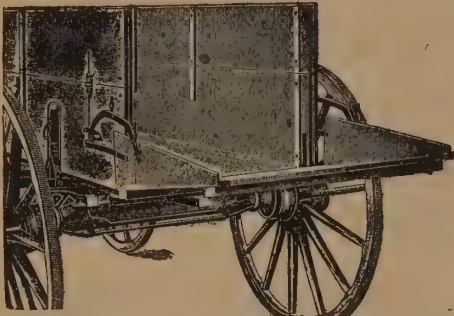
**Self-oiling Bearings.**

**Turns Easily at end of Row.**

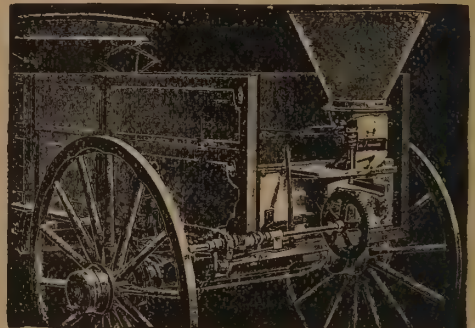


**Total Length, 7 ft. 3 in.  
Diameter, 20 in.  
Weight, 800 lbs.  
Made to carry additional weight.**

The "EASY" Three-Section Steel Land Roller  
A perfect pulverizer. An indispensable implement to every practical farmer.



The "EASY" Shoveling Board.  
Simplest constructed, easiest attached, steel sides, no rods to rattle, locks automatically—in a word, THE BEST.



The "DECATUR" Force-Feed, End-Gate Seeder

Will sow more regular than any gravity seeder made. CAN NOT CLOG UP.

If your dealer does not handle these goods, write

**F. B. TAIT MFG. CO.,**

- -

**Decatur, Ill.**



# THE AMERICAN FARMERS' ALMANAC.



## 6th Month JUNE 30 Days

### MOON'S PHASES.

### NEW YORK.

### CHICAGO.

|                         |              |      |              |
|-------------------------|--------------|------|--------------|
| ☾ Full Moon..... 2d.    | 4h. 53m. mo. | 2d.  | 3h. 53m. mo. |
| ☾ Last Quarter... 9d.   | 5h. 0m. ev.  | 9d.  | 4h. 0m. ev.  |
| ☾ New Moon..... 16d.    | 8h. 33m. mo. | 16d. | 7h. 33m. mo. |
| ☾ First Quarter... 23d. | 3h. 59m. ev. | 23d. | 2h. 59m. ev. |

| Day of Year. | Day of Month. | Day of Week. | Sun Rises.<br>H. M. | Sun Sets.<br>H. M. | Moon Sets.<br>H. M. | H. W.<br>N. Y.<br>H. M. |
|--------------|---------------|--------------|---------------------|--------------------|---------------------|-------------------------|
| 152          | 1             | Saturday     | 4 31                | 7 24               | 3 58                | 7 31                    |
| 153          | 2             | SUN.         | 4 30                | 7 25               | rises               | 8 11                    |
| 154          | 3             | Monday       | 4 30                | 7 26               | 8 32                | 8 56                    |
| 155          | 4             | Tuesday      | 4 30                | 7 26               | 9 16                | 9 39                    |
| 156          | 5             | Wednes.      | 4 29                | 7 27               | 9 55                | 10 22                   |
| 157          | 6             | Thursd.      | 4 29                | 7 28               | 10 32               | 11 4                    |
| 158          | 7             | Friday       | 4 29                | 7 28               | 11 6                | 11 51                   |
| 159          | 8             | Saturday     | 4 29                | 7 29               | 11 38               | 0 16                    |
| 160          | 9             | SUN.         | 4 28                | 7 29               | morn                | 1 7                     |
| 161          | 10            | Monday       | 4 28                | 7 30               | 0 9                 | 2 2                     |
| 162          | 11            | Tuesday      | 4 28                | 7 31               | 0 42                | 3 2                     |
| 163          | 12            | Wednes.      | 4 28                | 7 31               | 1 18                | 4 4                     |
| 164          | 13            | Thursd.      | 4 28                | 7 31               | 1 58                | 5 9                     |
| 165          | 14            | Friday       | 4 28                | 7 32               | 2 43                | 6 13                    |
| 166          | 15            | Saturday     | 4 28                | 7 32               | 3 36                | 7 11                    |
| 167          | 16            | SUN.         | 4 28                | 7 33               | sets                | 8 4                     |
| 168          | 17            | Monday       | 4 28                | 7 33               | 8 31                | 8 56                    |
| 169          | 18            | Tuesday      | 4 28                | 7 33               | 9 14                | 9 47                    |
| 170          | 19            | Wednes.      | 4 28                | 7 34               | 9 50                | 10 32                   |
| 171          | 20            | Thursd.      | 4 28                | 7 34               | 10 22               | 11 15                   |
| 172          | 21            | Friday       | 4 29                | 7 34               | 10 52               |                         |
| 173          | 22            | Saturday     | 4 29                | 7 34               | 11 20               | 0 23                    |
| 174          | 23            | SUN.         | 4 29                | 7 34               | 11 47               | 1 10                    |
| 175          | 24            | Monday       | 4 29                | 7 35               | morn                | 1 57                    |
| 176          | 25            | Tuesday      | 4 30                | 7 35               | 0 16                | 2 48                    |
| 177          | 26            | Wednes.      | 4 30                | 7 35               | 0 47                | 3 40                    |
| 178          | 27            | Thursd.      | 4 30                | 7 35               | 1 21                | 4 33                    |
| 179          | 28            | Friday       | 4 31                | 7 35               | 1 57                | 5 26                    |
| 180          | 29            | Saturday     | 4 31                | 7 35               | 2 39                | 6 17                    |
| 181          | 30            | SUN.         | 4 32                | 7 35               | 3 25                | 7 7                     |
| .....        | ...           | .....        | .....               | .....              | .....               | .....                   |

WEATHER.—The 1st—4th, dry and warm; 5th—8th, variable; 9th—12th, occasional thunder showers; 13th—17th, sultry; 18th—25th, dry and warm; 26th—30th, fair.

June comes, and the moon comes  
Out of the curving sea,  
Like a frail golden bubble  
To hang in the lilac tree.

June comes, and a croon comes  
Up from the old gray sea,  
But not the longed-for footstep  
And the voice at the door for me.

EXCESSIVE fat, produced by a heating and constipating diet, has much to do in producing small-sized litters of under-sized pigs.

AFTER the lima beans, or any other vines, get to the top of the pole, clip the ends off. This helps the development of flower and fruit.

A GOOD swine book should be in the hands of every breeder; the experience of old time breeders is worth a great deal to the beginner.

HOGS go naturally with dairying, and it pays to keep them on the dairy farm, even if for no other purpose than to dispose of the skim milk profitably.

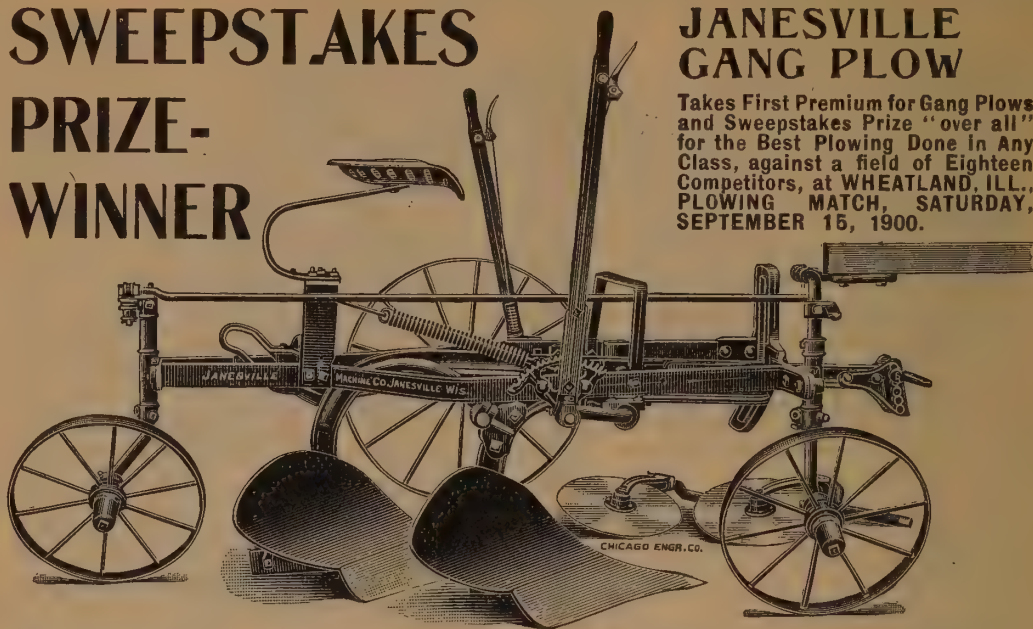
PRUNE off all broken ends of roots before planting the trees, always cutting from the under side. When the root is thus smoothly cut it will callous over quickly.

**EVERY FARMER**  
Should have one of our  
**FOOT-POWER SCREW CUTTING LATHES.**  
You can do your own repair work, and your boys can learn something of the machinist's trade. Send for catalogue  
**W. F. & JOHN BARNES CO., 220 Ruby St., Rockford, Ill.**

# SWEEPSTAKES PRIZE- WINNER

## JANESVILLE GANG PLOW

Takes First Premium for Gang Plows and Sweepstakes Prize "over all" for the Best Plowing Done in Any Class, against a field of Eighteen Competitors, at WHEATLAND, ILL., PLOWING MATCH, SATURDAY, SEPTEMBER 15, 1900.



## THE JANESVILLE MACHINE CO.

JANESVILLE, WISCONSIN.

## THE LONG & ALLSTATTER CO.



8Q. STEEL BEAM, FOUR-SHOVEL  
TONGUELESS, PIVOT AXLES.

Riding, Walking, Tongue  
and Tongueless

Hamilton Cultivators,  
Hay Rakes, Disc Harrows,  
Sulky Plows, Etc.,

are all high-grade farming  
tools of approved design,  
with improvements to sat-  
isfy the most progressive  
farmer. Guaranteed to do  
the work.

PERFECT in construction  
— made of best material —  
workmanship unexcelled.



12-16 INCH STEEL FRAME DISC  
HARROW.

If your dealer doesn't handle them, address No. 1 North Fourth St., Hamilton, Ohio.



8Q. STEEL BEAM, FOUR SHOVEL, TONGUE  
CULTIVATOR.

*You can't  
buy anything  
better,  
because there are  
no better  
Farming Tools  
made*



8Q. STEEL BEAM, SIX SHOVEL,  
RIDER, PIVOT AXLES.





CITY HALL, BRUSSELS.

### Protein in Feeds.

The following table gives the relative values of the feeds when protein alone is considered:

| GRAINS.                                  | Value when corn is worth per bushel. |        |        |
|------------------------------------------|--------------------------------------|--------|--------|
|                                          | \$0.15                               | \$0.20 | \$0.25 |
| Value for Protein.                       |                                      |        |        |
| Oats, per bushel.....                    | \$0.10                               | \$0.14 | \$0.17 |
| Kaffir corn, per bushel.....             | .15                                  | .20    | .25    |
| Soy beans, per bushel.....               | .61                                  | .85    | 1.02   |
| Wheat bran, per ton.....                 | 8.45                                 | 11.26  | 14.08  |
| Wheat middlings, ton.....                | 8.79                                 | 11.72  | 14.65  |
| Linseed meal (old process), per ton..... | 19.78                                | 26.39  | 32.96  |
| Chicago gluten meal, per ton.....        | 21.36                                | 28.48  | 35.60  |
| Cottonseed meal, ton.....                | 25.40                                | 33.88  | 42.35  |

| ROUGHAGE.              | Value per ton when Prairie Hay is worth per ton. |        |         |
|------------------------|--------------------------------------------------|--------|---------|
|                        | \$2.00                                           | \$3.00 | \$4.00  |
| Value for Protein.     |                                                  |        |         |
| Alfalfa hay.....       | \$6.05                                           | \$9.08 | \$12.11 |
| Red clover hay.....    | 3.88                                             | 5.82   | 7.77    |
| Orchard grass hay..... | 2.74                                             | 4.11   | 5.48    |
| Millet hay.....        | 2.57                                             | 3.85   | 5.14    |
| Timothy hay.....       | 1.65                                             | 2.48   | 3.31    |
| Sorghum hay.....       | 1.37                                             | 2.05   | 2.74    |
| Corn fodder.....       | 1.14                                             | 1.71   | 2.28    |
| Oat straw.....         | .91                                              | 1.37   | 1.82    |
| Wheat straw.....       | .45                                              | .68    | .91     |
| Sugar beets.....       | .62                                              | .94    | 1.25    |
| Mangel-wurzels.....    | .57                                              | .85    | 1.14    |

### Value of Horse Manure.

Different valuations are given horse manure, as it is made from many different substances. It is estimated that a ton of manure contains about ten pounds of nitrogen, ten pounds of potash, and four pounds of phosphoric acid, the value of which is about two dollars. It will be interesting for farmers who buy manure to consider whether it will pay to haul manure a long distance unless it is of the most valuable kind. Manure from livery stables, which is composed mostly of straw, is not worth as much as that which is free from litter, hence when the farmer gives his labor and that of his team to haul a ton of manure a mile or more, as well as load and unload it, he may pay out more for it than it is worth.

### Science in Farming.

The many comparatively recent discoveries of microscopical life in places where a few years ago its presence was not even suspected, show this to be a lively old earth after all, and open the bars to a broad field of scientific research. The influence of these lower forms of life upon the soil and the growth of plants is only beginning to be realized or understood. Farmer boys should be educated in a direction which will enable them to grasp the situation and use aright the power given man over the wonderful forces of nature.

Farming has this peculiarity, that it can absorb and supply all knowledge. Not one of the sciences but is related, or may be related, to agriculture. Botany, rightly understood, is the art of growing better potatoes, beans and corn. Entomology is that economic science that discusses what bugs are of use to man, and what are injurious. Geology is an analysis of the soils and rocks that underlie the soils, for the purpose of making them more available for human welfare.

### Corn-and-Cob Meal.

It seems to have been fully demonstrated that it pays to grind the cob with the corn; that pound for pound corn and cob meal is as valuable as corn meal alone. Actual feeding experiments have proven the above to be true. Some argue that it must be the "mechanical effect," but what does it matter as long as the results are obtained? In the light of this demonstration it is evident that the farmers of the West have destroyed millions of tons of valuable feed when they have burned the cobs or hauled them into some out-of-the-way place to rot. The waste should no longer be permitted to go on. Some of the great cattle feeding companies in the West are not only saving all of the cobs on their own corn, but are buying the cobs from farmers wherever they can get them.



**QUALITY COUNTS**

# Kingman Klondike and Commodore



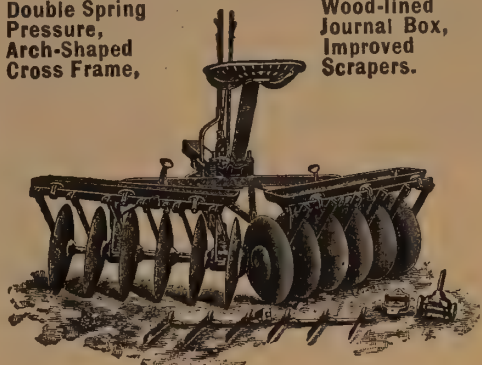
Kingman Klondike Sulky Plow.

We are headquarters for:  
WALKING PLOWS, WHEEL PLOWS, CULTIVATORS,  
HARROWS, DRILLS, SEEDERS, PLANTERS, BUG-  
GIES, WAGONS, PUMPS, WINDMILLS, LISTERS, HAY  
GOODS, LAWN SWINGS, FEED MILLS, FEED CUT-  
TERS, BINDER TWINE, ROPE, SHOVELING BOARDS,  
STALK CUTTERS, LAND ROLLERS, ETC., ETC.

Wheel Plows during the past season have been  
the wonder of the farming community  
They are strictly modern implements.

**KINGMAN No. 3 DISC HARROW**, fitted with  
Double Spring  
Pressure,  
Arch-Shaped  
Cross Frame,

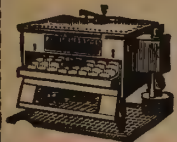
Wood-lined  
Journal Box,  
Improved  
Scrapers.



Kingman No. 3 Disc Harrow.

**KINGMAN & CO., PEORIA, ILL., MILWAUKEE, WIS.**  
**KINGMAN ST. LOUIS IMPLEMENT CO., ST. LOUIS, MO.**  
**KINGMAN-MOORE IMPLEMENT CO., KANSAS CITY, MO.**  
**KINGMAN IMPLEMENT CO., OMAHA, NEB.**  
**KINGMAN-GALBRAITH IMP. CO., DES MOINES, IA., MINNEAPOLIS, MINN.**  
**KINGMAN TEXAS IMPLEMENT CO., DALLAS, TEX.**

## Best Incubator for the Money. \$5.00



**THE RELIABLE BANTLING SPECIAL 50-Egg Size.**  
Not a toy or plaything. Made with Reliable exactness and care.  
The equal of any hatcher made, only smaller. Just the thing  
for those needing moderate capacity. Results guaranteed  
if instructions are followed. Full description  
of these and our full line of incubators in our  
sent for 10c. Tells all about the poultry business. Worth many dollars to every breeder,  
large or small. Send for it now.

**20th CENTURY POULTRY BOOK.**  
Reliable Incubator and Brooder Co. Box A 46 Quincy, Ill.



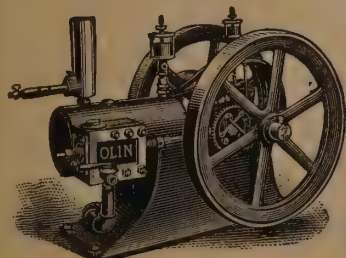
## A PRACTICAL POULTRY BOOK

One which covers  
every detail of the  
industry from to-

cubation to market is our **20th CENTURY CATALOGUE.** It will teach you  
from the practical experience of others what it would take you ten years to learn. Among other  
things it tells about the latest improvements in the world famous **Reliable Incubators**  
and **Brooders.** Sent for 10c to pay postage. **Reliable Inc. & Brdr. Co. Box A 46 Quincy, Ill.**



## SOMETHING NEW FOR FARMERS



The No. 2 Olin

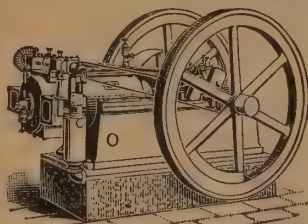
An actual 2-Horse Power Gas or Gasoline Engine  
that is simple, reliable, of first-class workmanship  
and material, and finely finished, for only \$100, with  
full equipment for gas, and \$110 for gasoline.

These engines are made in lots of 100 or more at a time,  
hence the price. They are the result of over eight years'  
experience in gas engine manufacture. Twelve sizes up to  
60-H. P. Send for catalogue.

**OLIN GAS ENGINE CO.**

Dock Street, BUFFALO, N. Y.

# The "Springfield" Engine



Is built especially to meet the requirements of the practical, labor-saving farmer. No experienced engineer required to operate this engine. We build these engines from 1 to 50 H.P. actual.

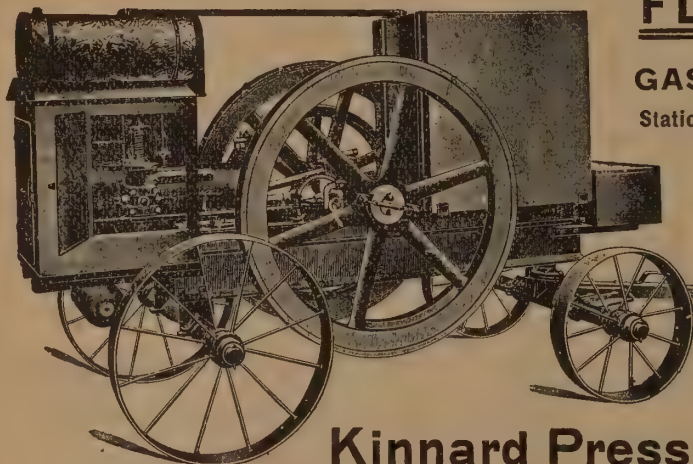
THEY ARE THE  
**SAFEST, CHEAPEST, and  
MOST RELIABLE POWER**

for Dairies, Grinding, Pumping, or anything for which Power is required. Thousands of our make in use on Farms in every State and Territory in U. S. Write for Catalogue.

## The Springfield Gas Engine Co.

Write for Catalogue J

No. 21 Park St., SPRINGFIELD, OHIO



## "FLOUR CITY"

### GASOLINE ENGINES

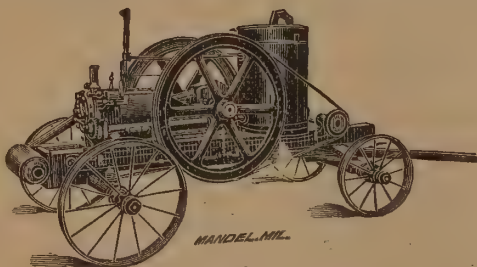
Stationary, Portable, and Traction

3 TO 25 HORSE POWER

Our PORTABLE is the simplest, safest and cheapest power for THRESHING MACHINES, and doing all farm work. Every Engine fully guaranteed. Write for free illustrated catalogue, prices, and terms. Address

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## THE BADGER GAS AND GASOLINE ENGINE



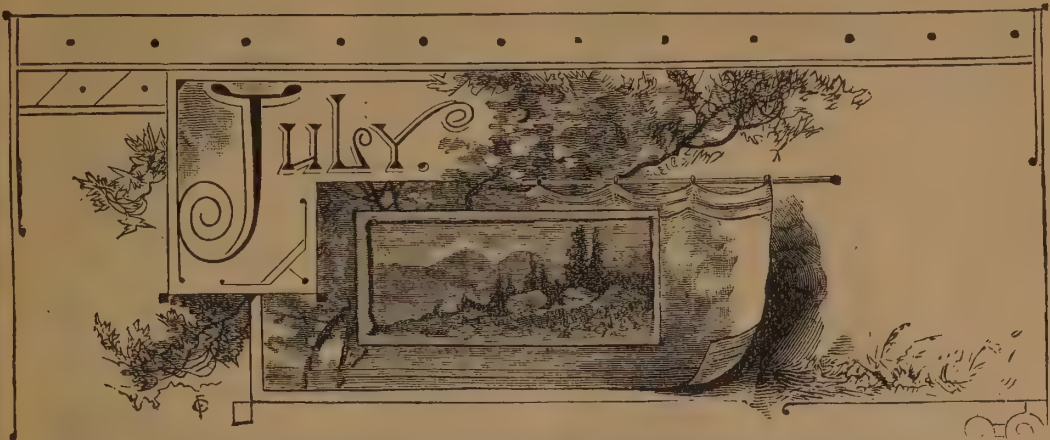
Safest, cheapest and most reliable power. Built stationary and portable. Specially adapted for general farm use and creameries, and will operate in cold as well as warm weather. We also build special pumping engines.

Write for catalogue and prices.

## C. P. & J. Lauson,

A-151 West Water Street, Milwaukee, Wis.





7th Month JULY 31 Days

| MOON'S PHASES.       |      |               | NEW YORK. |              |  | CHICAGO. |              |  |
|----------------------|------|---------------|-----------|--------------|--|----------|--------------|--|
| Full Moon.....       | rd.  | 6h. 17m. ev.  | rd.       | 5h. 17m. ev. |  | rd.      | 5h. 17m. ev. |  |
| Last Quarter....     | 8d   | 10h. 20m. ev. | 8d.       | 9h. 20m. ev. |  | 8d.      | 9h. 20m. ev. |  |
| New Moon.....        | 15d. | 5h. 10m. ev.  | 15d.      | 4h. 10m. ev. |  | 15d.     | 4h. 10m. ev. |  |
| First Quarter...23d. |      | 8h. 58m. mo.  | 23d.      | 7h. 58m. mo. |  | 23d.     | 7h. 58m. mo. |  |
| Full Moon.....       | 3rd. | 5h. 34m. mo.  | 3rd.      | 4h. 34m. mo. |  | 3rd.     | 4h. 34m. mo. |  |

| Day of Year. | Day of Month. | Day of Week. | Sun Rises.<br>H. M. | Sun Sets.<br>H. M. | Moon Rises.<br>H. M. | H. W. N. Y.<br>H. M. |
|--------------|---------------|--------------|---------------------|--------------------|----------------------|----------------------|
| 182          | 1             | Monday       | 4 32                | 7 35               | rises                | 7 50                 |
| 183          | 2             | Tuesday      | 4 32                | 7 35               | 7 56                 | 8 34                 |
| 184          | 3             | Wednes.      | 4 33                | 7 34               | 8 34                 | 9 20                 |
| 185          | 4             | Thursd.      | 4 33                | 7 34               | 9 9                  | 10 2                 |
| 186          | 5             | Friday       | 4 34                | 7 34               | 9 42                 | 10 43                |
| 187          | 6             | Saturday     | 4 35                | 7 34               | 10 14                | 11 27                |
| 188          | 7             | SUN.         | 4 36                | 7 33               | 10 46                |                      |
| 189          | 8             | Monday       | 4 36                | 7 33               | 11 20                | 0 43                 |
| 190          | 9             | Tuesday      | 4 37                | 7 33               | 11 56                | 1 38                 |
| 191          | 10            | Wednes.      | 4 38                | 7 32               | morn                 | 2 38                 |
| 192          | 11            | Thursd.      | 4 38                | 7 32               | 0 38                 | 3 45                 |
| 193          | 12            | Friday       | 4 39                | 7 32               | 1 26                 | 4 53                 |
| 194          | 13            | Saturday     | 4 39                | 7 31               | 2 21                 | 5 59                 |
| 195          | 14            | SUN.         | 4 40                | 7 31               | 3 23                 | 6 59                 |
| 196          | 15            | Monday       | 4 41                | 7 30               | sets                 | 7 50                 |
| 197          | 16            | Tuesday      | 4 42                | 7 29               | 7 47                 | 8 37                 |
| 198          | 17            | Wednes.      | 4 42                | 7 29               | 8 22                 | 9 24                 |
| 199          | 18            | Thursd.      | 4 43                | 7 28               | 8 53                 | 10 5                 |
| 200          | 19            | Friday       | 4 44                | 7 28               | 9 22                 | 10 43                |
| 201          | 20            | Saturday     | 4 45                | 7 27               | 9 50                 | 11 24                |
| 202          | 21            | SUN.         | 4 46                | 7 26               | 10 18                |                      |
| 203          | 22            | Monday       | 4 47                | 7 25               | 10 47                | 0 28                 |
| 204          | 23            | Tuesday      | 4 47                | 7 24               | 11 18                | 1 14                 |
| 205          | 24            | Wednes.      | 4 48                | 7 24               | 11 54                | 2 3                  |
| 206          | 25            | Thursd.      | 4 49                | 7 23               | morn                 | 2 58                 |
| 207          | 26            | Friday       | 4 50                | 7 22               | 0 34                 | 3 54                 |
| 208          | 27            | Saturday     | 4 51                | 7 21               | 1 20                 | 4 52                 |
| 209          | 28            | SUN.         | 4 52                | 7 20               | 2 11                 | 5 48                 |
| 210          | 29            | Monday       | 4 53                | 7 19               | 3 6                  | 6 41                 |
| 211          | 30            | Tuesday      | 4 54                | 7 18               | 4 7                  | 7 29                 |
| 212          | 31            | Wednes.      | 4 55                | 7 17               | rises                | 8 11                 |

WEATHER.—The 1st—4th, occasional thunder showers; 5th—8th, sultry; 9th—13th, clear and warm; 14th—18th, sultry; 19th—23d, changeable; 24th—31st, intense heat.

When the scarlet cardinal tells  
Her dreams to the dragon fly,  
And the lilies tall lean over the wall  
To bow to the butterfly, it is July.

When the heat like a mist veil floats,  
And poppies flame in the rye,  
When the grass is tall and the roses fall,  
And nobody wonders why, it is July.

DON'T "break" the colt; educate it.

A GOOD blanket during the winter saves many times its cost in feed.

PASTURAGE is necessary to cheap hog raising; as it is to cheap cattle raising.

OF all sources from which bees derive their support, clover is the most important.

EVERY FARMER  
Should have a DECORAH



Steel  
Mill and  
Tower...

Why? Because it is the lightest running and most durable Windmill outfit made.... Write for circulars of our Windmills, Towers, Tanks, Tank Heaters, Stump Pullers, Sweep Grinders. Etc.

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SNOW MANUFACTURING CO.  
214 STATE STREET, GENEVA, ILL.

# DON'T OVERLOOK THE BEST SELBY, STARR & CO.

... PEORIA, ILLINOIS ...

Manufacturers of

Peoria Shoe Drills  
Illinois Disc Drills  
Peerless Disc and Shoe Press Drills  
Glendale Disc and Shoe Press Drills  
Glendale Hoe Drills  
Glendale Western Hoe Drills  
Union Fertilizer Hoe and Disc Drills  
Union One Horse 5 Hoe Drill  
Union Junior Broadcast Seeder

Western Broadcast Seeder  
Columbia Broadcast Seeder  
with or without Cultivators  
Cyclone Broadcast Seeder  
Union Single and Double Row  
Stalk Cutters  
Glendale Pipe and U-Bar  
Harrows  
Glendale Stalk Rakes, Shovel-  
ing Boards, Etc.



## THE GLENDALE DISC PRESS DRILL

a great labor-saving machine, as corn and oats stubble can be drilled with out preparation. Extremely trashy, soft, dry or hard ground its special adaption. The GLENDALE will pack the earth over the grain, so it cannot be uncovered by high winds in weather so dry that all other drills are operated at a great disadvantage.

### MANY POINTS OF EXCELLENCE

Ease of management, simplicity of construction, a comfortable seat for the operator, where he has full control of the machine; absolute control of pressure, insuring even depth of planting; reliable and positive force feed, perfect work.

WRITE FOR CATALOG AND PRICES TO

## SELBY, STARR & CO.

PEORIA, ILLINOIS.





THE MISCHIEVOUS IMP.

N. WUNSCH.

## THE AMERICAN FARMERS' ALMANAC.

### Pipes Required to Drain an Acre of Land at Various Widths of Trenches.

| Drains<br>Apart. |     | Feet<br>Required. | Drains<br>Apart. |     | Feet<br>Required. |
|------------------|-----|-------------------|------------------|-----|-------------------|
| Ft.              | In. |                   | Ft.              | In. |                   |
| 3                | 0   | 14,520            | 22               | 6   | 1,936             |
| 4                | 0   | 10,890            | 24               | 0   | 1,815             |
| 4                | 6   | 9,680             | 25               | 6   | 1,708             |
| 6                | 0   | 7,260             | 27               | 0   | 1,613             |
| 7                | 0   | 6,223             | 28               | 6   | 1,529             |
| 8                | 0   | 5,445             | 30               | 0   | 1,452             |
| 9                | 0   | 4,840             | 31               | 6   | 1,383             |
| 10               | 0   | 4,356             | 33               | 0   | 1,320             |
| 12               | 0   | 3,630             | 36               | 0   | 1,210             |
| 13               | 6   | 3,227             | 39               | 0   | 1,117             |
| 15               | 0   | 2,804             | 42               | 0   | 1,037             |
| 16               | 6   | 2,640             | 45               | 0   | 968               |
| 18               | 0   | 2,420             | 48               | 0   | 908               |
| 19               | 6   | 2,234             | 50               | 0   | 871               |
| 21               | 0   | 2,074             |                  |     |                   |

### Cavalry Horses.

The United States standard cavalry horse is an animal standing 15.1 to 16 hands, with short back, good bone, tendons and feet. The head of medium size, the neck rising from oblique shoulders, and the carriage animated and graceful. Buck knees, or calf-kneed animals are rejected, the former conformation indicating weakness and the latter being indicative of stiff, ungraceful action. The more breedy the appearance and the higher the finish, the more acceptable to the service.

### Yield of Wheat per Acre in Different Countries.

|                        | AVERAGE<br>BUSHELS. |
|------------------------|---------------------|
| Australasia—           |                     |
| New South Wales.....   | 15                  |
| New Zealand.....       | 26.5                |
| Queensland.....        | 11.5                |
| South Australia.....   | 7.6                 |
| Tasmania.....          | 18                  |
| Victoria.....          | 12.5                |
| Western Australia..... | 11.5                |
| United States.....     | 12.4                |
| British North America— |                     |
| Manitoba.....          | 19.7                |
| Ontario.....           | 18.2                |
| France.....            | 17                  |
| Germany.....           | 10.2                |
| Great Britain.....     | 30                  |
| India.....             | 9.3                 |
| Italy.....             | 10.4                |
| Russia.....            | 8                   |

### Filling An Ice House.

A western farmer has an ingenious and easy way of accumulating his supply of ice for the summer. There is a spring on his farm, and when the weather is cold enough he simply lets the water into a large box-like inclosure, where it freezes, an addition being made to the supply by the freezing of successive shallow layers of water. When the whole inclosure is filled with solid ice he protects it properly, and there is his ice house.

### Average Weights per Peck.

|                                          | LBS. |
|------------------------------------------|------|
| Potatoes.....                            | 20   |
| White Turnips.....                       | 16   |
| Swede Turnips.....                       | 18   |
| Onions.....                              | 16   |
| Broad Beans.....                         | 9    |
| Kidney Beans.....                        | 10   |
| Green Peas.....                          | 8    |
| Apples.....                              | 16   |
| Pears.....                               | 18   |
| Gooseberries.....                        | 16   |
| Plums, Damsons, and all Stone Fruit..... | 18   |

When grapevines fail to bear, and do not thrive well under good cultivation, cut the old vine off close to the ground and allow a new cane to grow. Train it on the trellis, do not allow too many shoots, and the result will be a great improvement over the old cane.

A man who cannot find pleasure in arranging and rearranging his tool sheds, stables, grain bins, etc., when other work is not pressing, or on rainy days, has but little interest in his work.



## LIGHTING HAY PRESSES

### ARE THE BEST

Greatest capacity; Least breakage;  
Smoothest and most compact Bales.

GUARANTEED.

**KANSAS CITY HAY PRESS CO.**

423 Mill St., Kansas City, Mo.



### Government and the Farmer.

An idea of the work done by the Agricultural Department and of its value may be obtained by an enumeration of some of the subjects which have been investigated and on which publications have been issued. The division of vegetable physiology and pathology has studied the disease of shade and ornamental trees, and has instructed those who plant and care for such trees in the causes of and remedies for the diseases. It has taught fruit growers how to care for and improve the orange, pineapple and other fruits. It has discovered the secret of propagating the fig. It has found remedies for diseases of truck crops, cotton, wheat, corn and other cereals. A good deal of work is done in investigating the character and conditions, including the proper location of various plants. It has thus been found that jute can profitably be raised in the South, and flax on Puget Sound.

The department furnishes farmers with information as to the character of weeds sent by them for investigation, and it issues warnings to State experiment stations and to local authorities of the presence of dangerous weeds in their localities. It also makes tests of seeds and publishes the information gained by the experiments. It furnishes information as to grasses, grains, poisonous plants, roots and fruits. It makes thorough examination of soils for agricultural purposes, ascertains their capacity, and issues a bulletin showing the differences in land.

The department tells the farmer the character of his land, the kind of crop best adapted to it and to the climate, is constantly experimenting to discover new crops for him, furnishes him with seeds, tells him the nature of the enemies that will attack his crops, warns him of their actual presence, and instructs him as to the remedies to be applied. It also separates his diseased cattle from his

healthy cattle; so the latter bring a higher price abroad than competing cattle bring; informs him of the character of the foreign demand for farm products, and advises him as to the best manner of packing his fruit.

The value of the work of the forestry division cannot be overestimated. It has done much to stimulate a widespread interest in the subject of forest preservation, and has accomplished an admirable work in decreasing the number of forest fires. The department also instructs the farmer in the art of making good roads, and excites a desire for them by showing their great economic value to all who have heavy loads to haul to market or the railway station. This work is done by the government for the benefit of those who annually provide from sixty-five to seventy per cent of the materials for our export trade.

This government does more than any other government to help its agriculturist to skillful and profitable cultivation, and to point out to him the best methods of distribution.

For all the work which this department has done the government has thus far expended less than \$32,000,000. The first appropriation for the agricultural department was of \$1,000, and was made in 1839. Three years afterward there was another appropriation of a like amount. Two years after that Congress appropriated \$2,000. By 1857 the annual expenditure had reached \$75,000, but it fell again and then rose, but it did not exceed \$500,000 until 1885, and the occasion of the increase for that year was the establishment of the Bureau of Animal Industry. In 1888 the appropriation exceeded \$1,000,000, but in that year the Weather Bureau was transferred from the Signal Corps to the department. The government is now spending about \$3,000,000 a year on its farmers, but included in this sum is about \$2,000,000 for the Weather Bureau, the Bureau of Animal Industry, and the experiment stations.

# "ELI" BALES ARE BEST



Hay bales made on Eli Presses are pressed (not bundled) and will load heaviest weights in cars. Cheaper freight. Best selling bales. 38 styles and sizes of presses for horse and steam power. Used throughout the world. If interested, send for large illustrated catalogue. Address

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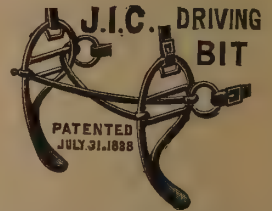


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60 BALES IN 60 MINUTES :: :: 15 TONS IN 10 HOURS

OUR PLAN.—We will ship this ALL-STEEL THREE-FEED BALER to any one, and if, after TEN DAYS' TRIAL, you would rather KEEP YOUR MONEY than the ADMIRAL HAY PRESS, you may haul it back to depot and we will pay freights both ways. We take all chances, and we have the FASTEST BALER AND EASIEST WORKER ON EARTH. WRITE FOR PRICES

**COOKSON MFG. CO.** = **KANSAS CITY MISSOURI**  
888 MULBERRY STREET



# THE AMERICAN FARMERS' ALMANAC.



## 8th Month AUGUST 31 Days

| MOON'S PHASES.          | NEW YORK.         | CHICAGO.     |
|-------------------------|-------------------|--------------|
| ☾ Last Quarter... 7d.   | 3h. 2m. mo. 7d.   | 2h. 2m. mo.  |
| ☾ New Moon..... 14d.    | 3h. 27m. mo. 14d. | 2h. 27m. mo. |
| ☾ First Quarter... 22d. | 2h. 52m. mo. 22d. | 1h. 52m. mo. |
| ☾ Full Moon..... 29d.   | 3h. 21m. ev. 29d  | 2h. 21m. ev. |

| Day of Year. | Day of Month. | Day of Week. | Sun Rises:<br>H. M. | Sun Sets:<br>H. M. | Moon Rises:<br>H. M. | H. W.<br>N. Y.<br>H. M. |
|--------------|---------------|--------------|---------------------|--------------------|----------------------|-------------------------|
| 213          | 1             | Thursd.      | 4 56                | 7 16               | 7 42                 | 8 57                    |
| 214          | 2             | Friday       | 4 57                | 7 15               | 8 16                 | 9 40                    |
| 215          | 3             | Saturday     | 4 58                | 7 14               | 8 50                 | 10 23                   |
| 216          | 4             | SUN.         | 4 59                | 7 13               | 9 23                 | 11 6                    |
| 217          | 5             | Monday       | 5 0                 | 7 12               | 9 59                 | 11 56                   |
| 218          | 6             | Tuesday      | 5 1                 | 7 10               | 10 39                | 0 23                    |
| 219          | 7             | Wednes.      | 5 2                 | 7 9                | 11 24                | 1 19                    |
| 220          | 8             | Thursd.      | 5 2                 | 7 8                | morn                 | 2 23                    |
| 221          | 9             | Friday       | 5 3                 | 7 7                | 0 16                 | 3 33                    |
| 222          | 10            | Saturday     | 5 4                 | 7 5                | 1 30                 | 4 41                    |
| 223          | 11            | SUN.         | 5 5                 | 7 4                | 2 14                 | 5 46                    |
| 224          | 12            | Monday       | 5 6                 | 7 3                | 3 19                 | 6 42                    |
| 225          | 13            | Tuesday      | 5 7                 | 7 1                | 4 24                 | 7 31                    |
| 226          | 14            | Wednes.      | 5 8                 | 7 0                | sets                 | 8 13                    |
| 227          | 15            | Thursd.      | 5 9                 | 6 59               | 7 22                 | 8 56                    |
| 228          | 16            | Friday       | 5 10                | 6 57               | 7 51                 | 9 36                    |
| 229          | 17            | Saturday     | 5 11                | 6 56               | 8 19                 | 10 12                   |
| 230          | 18            | SUN.         | 5 12                | 6 54               | 8 48                 | 10 49                   |
| 231          | 19            | Monday       | 5 13                | 6 53               | 9 19                 | 11 29                   |
| 232          | 20            | Tuesday      | 5 14                | 6 51               | 9 53                 | 0 35                    |
| 233          | 21            | Wednes.      | 5 15                | 6 50               | 10 30                | 1 25                    |
| 234          | 22            | Thursd.      | 5 16                | 6 48               | 11 13                | 2 18                    |
| 235          | 23            | Friday       | 5 17                | 6 47               | morn                 | 3 18                    |
| 236          | 24            | Saturday     | 5 18                | 6 45               | 0 1                  | 4 18                    |
| 237          | 25            | SUN.         | 5 19                | 6 44               | 0 54                 | 5 17                    |
| 238          | 26            | Monday       | 5 20                | 6 42               | 1 52                 | 6 12                    |
| 239          | 27            | Tuesday      | 5 21                | 6 41               | 2 54                 | 7 4                     |
| 240          | 28            | Wednes.      | 5 22                | 6 39               | 4 0                  | 7 48                    |
| 241          | 29            | Thursd.      | 5 23                | 6 38               | rises                | 8 32                    |
| 242          | 30            | Friday       | 5 24                | 6 36               | 6 47                 | 9 19                    |
| 243          | 31            | Saturday     | 5 25                | 6 35               | 7 22                 |                         |

**WEATHER.**—The 1st—4th, frequent thunder showers; 5th—9th, sultry; 10th—15th, dry and warm; 16th—21st, variable; 22d—26th, intense heat; 27th—31st, fair and warm.

The vivid August moon has come;  
A slumbrous silence fills the sky,  
The fields are still, the woods are dumb,  
In grassy sleep the waters lie.  
And now a joy, too deep for sound,  
A peace no other season knows,  
Hushes the heavens and wraps the earth:  
The blessing of supreme repose.

GUINEA hens are more often seen adorning a farmyard than the farmer's table, but they are exceedingly good eating.

It is useless to attempt to keep well animals in a healthy condition where they are compelled to eat and sleep with sick ones.

SHEEP dislike a strong, penetrating wind more than a severe cold, as their owners do. Provide some shelter behind which they can run, for a wind break.

## "Goshen" Tanks Represent Honest Tank Value....

and these are the reasons why: They are made of the



best heavy galvanized steel; they simply cannot warp, swell or fall to pieces from drying out; heavy iron bound edges protect them from bending or denting.

## ANTI-SEPTIC

there is no place for disease germs in these tanks. Pure water makes good milk and butter; prevents many diseases, hog cholera, etc. Don't buy until you get our 48 page catalogue, sent FREE.

Kelly Foundry and Machine Co. 90 Purl St., Goshen, Ind.

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HARROWS, Spike

HARROWS, Spr'g

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CULTIVATORS

ROLLERS



HIGH-GRADE

FARMERS BUY

HIGH-GRADE

IMPLEMENTS

FIRST-CLASS

DEALERS Handle

THE BEST. WE

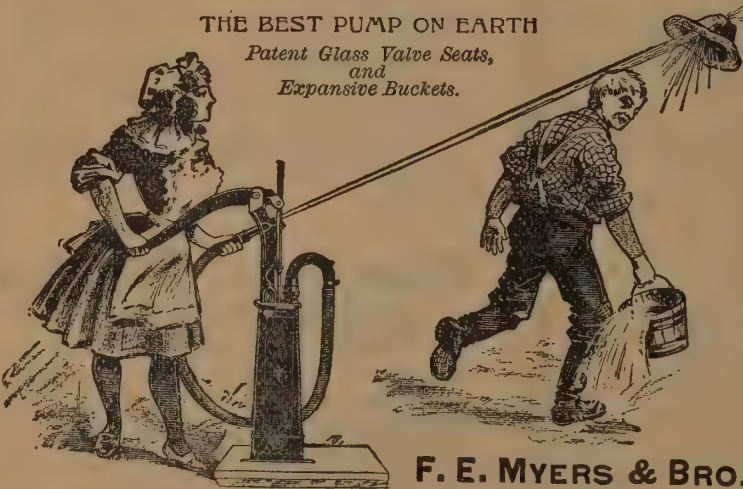
MAKE THE BEST

WE MANUFACTURE THE MOST COMPLETE LINE OF PLOWS, HARROWS, CULTIVATORS, ROLLERS, BEET CULTIVATORS, AND BEET DIGGERS MADE IN THE U. S. WRITE FOR CATALOG

## "Take off your Hat to Myers!"

THE BEST PUMP ON EARTH

*Patent Glass Valve Seats,  
and  
Expansive Buckets.*



Ask your Dealer for the most admired Force, Lift, Tank and Spray Pumps, Forks and Hay Carriers on Earth Manufactured by the Largest Pump and Hay-Tool Works in the World. Write for Descriptive Circulars. The Right Time to Write is Right Now!

F. E. MYERS & BRO., Ashland, Ohio.

### Something New—Myers' "Stayon" Door Hanger

WRITE FOR CIRCULAR AND PRICES





NOONDAY.

LOUIS ZIMENEZ.

### Pig Feeding.

The secret of making good and cheap pork is to keep the pig growing from the day of its birth until it is killed, and to give such a variety of foods that both muscle and fat will be developed in fair proportion, and to see that these foods are such as will give an appetizing flavor to the meat.

The Utah Station in testing the feeding value of skim milk reached the conclusion that skim milk when fed in combination with grain makes a very valuable food for hogs at all periods of their growth, but particularly so during the earlier periods. Skim milk and grain in combination make a much more economic ration for hogs than either milk alone or grain alone. The milk and grain fed lots of pigs required 2.58 pounds of digestible matter, the milk fed lots 2.85 pounds, and the grain fed lots 3.19 pounds to make one pound of gain in live weight.

When fed in combination with grain, skim milk has 63 per cent greater feeding value than it has when fed alone, 100 pounds of skim milk taking the place of 23.2 pounds of grain in the former case and 14.2 pounds in the latter.

The following is a comparison of results secured from feeding a mixture of corn meal and wheat shorts to one lot of pigs, and pure corn meal to another lot.

The pigs used were six sows, five and one-half months old at the beginning of the experiment. They were divided as evenly as possible into two lots of three each. The pigs were high grade Chester Whites. The pigs in lot 1 were the shorts-corn meal ones, while those of lot 2 were the corn meal ones. The experiment was continued for a period of 70 days.

The pens in which the pigs were kept being about 30x15 feet, with a comfortable small shelter house in each lot. While the weather was such as to cause the pens to be muddy more or less, they were kept in good sani-

tary condition by frequent cleaning and bedding.

An examination of the final weights shows that those fed the mixture of shorts and corn meal gained a total of 353½ pounds, while the corn meal lot gained but 326¾ pounds. The three pigs of lot 1 made a combined daily growth of 5.05 pounds, or an average of 1.68 pounds per pig, as compared with 4.66 pounds for lot 2, or an average of 1.55 pounds per pig.

The hog must drink as well as eat, and the drink given will make a great difference in the rate of growth and the flavor of the meat. The worst drink a hog can have is muddy, stagnant water, and such a drink will never make meat of fine flavor.

The fact that the hog is a grazing animal seems to be lost sight of generally, although in the East, where the farms are small and growing smaller each year, farmers are beginning to see the advantage of pasturing hogs. In a certain section of New Jersey a large area is devoted wholly to pasturing hogs, the owner of the land making a business of pasturing the hogs for other farmers at a small price per head for the season.

The first 100 pounds of a hog costs the least money; therefore, unless feed is plenty without buying, there can be more clear money made by raising a larger number of pigs and selling them at an early age. There is scarcely a time in the year but pigs that will weigh from forty to sixty pounds will sell at a good price to men who make a business of buying pigs and feeding them. This gives the small farmer a chance to raise the pigs and sell them to the large farmer and feeder.

A few sprigs of cedar in the nest of a setting hen is said to be a sure preventive of chicken nit lice.

Under ordinary circumstances it is the kind and amount of the cultivation more than the area of land that determines the result.



### How to Measure Hay.

Here are a few simple rules for determining the amount of hay in a stack or mow when it is not convenient to weigh it. Selling by measurement is not always the most satisfactory method, but it is sometimes the most convenient.

Sellers are disposed to insist that a cube of seven feet is a ton. This is entirely too small and will not weigh out. How many cubic feet will make a ton depends on so many conditions that no certain rule can be given.

It depends on the kind of hay, whether timothy, alfalfa or prairie; on the character of the hay, whether fine or coarse; on the condition in which it was put in the stack, and particularly on the size, especially the depth of the stack or mow.

In a very large mow, well settled, 400 cubic feet of alfalfa or timothy may average a ton, but on top of the mow or in a small stack it requires 500 to 512 cubic feet, sometimes even more.

It is not safe for the buyer to give on less than 500 feet; but in a well filled mow, in selling it, it would be safer to weigh than to sell at that measurement.

To find the number of tons in a barn, mow or hay shed, multiply the length, depth and breadth together and divide by the number of cubic feet you think, considering the quality of hay, and the condition in which it was put up, will make a ton.

To measure a cone-shaped stack, find the area of the base, by multiplying the square of the circumference in feet by the decimal .07958 and multiply the product thus obtained by one-third of the height in feet, and then divide as before, cutting off five right-hand figures.

The correctness of this will depend somewhat on the approximation of the stack to a regular cone, and if the stack bulges out it makes the product too small. The better way is to estimate the area of the stack up to the

point of tapering in and apply the above rule to the cone-shaped top.

The best way is to weigh. The experience of weighing a few stacks will enable any one to judge quite correctly. Another approximate rule for measuring a round stack is thus: Select a place which is as near as possible to what the average size would be if the stack were of uniform diameter from the ground to the top of the point. Measure around this to get the circumference. Add four ciphers (0000) to the circumference at the right and divide the whole by 3.1559 to get the diameter. Now multiply half of the diameter by half of the circumference and you have the feet of the circular area. Multiply by the number of feet the stack is high, and you will have the solid or cubic feet in the whole. Then divide by 500 or 512, which will give the number of tons in the stack.

### The Largest Creamery.

It is reported that the largest creamery in the world is near St. Albans, Vt. Twelve thousand cows, owned by 700 farmers, supply it with cream, and the average daily product is 10,000 pounds, or five tons of butter. All cream received is tested often enough in order to obtain thorough knowledge of the amount of butter fat in the average product of each farmer's dairy, and he is paid daily for the butter values he brings in. There are fifty-four stations for receiving the milk, and at these stations the cream is separated, and only the latter is shipped to the factory. They run a score of churns, each one of which will turn off 500 pounds of butter in one batch. The butter-working machines are four in number, and in a very few moments eighty pounds can be properly worked and salted. They use a carload of salt every two months, and the factory employs fully sixty hands, besides the forty in the stations' employe force, to prepare the product.

# THE BEST FARM POWER

for all purposes is an Upright or Horizontal combined Engine and Boiler such as we show here. It is of special value in cutting and grinding feed, shelling corn, threshing, pumping water, separating cream, sawing wood, &c., &c.

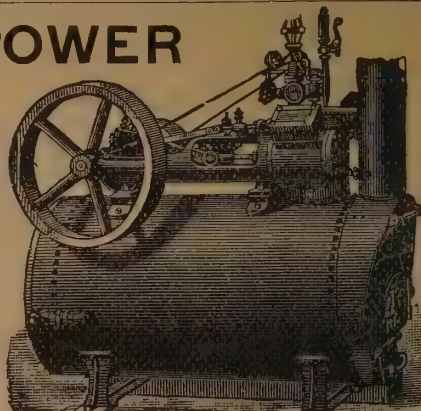
## LEFFEL ENGINES

represent unusual merit in design, material and construction. QUICK STEAMERS, ECONOMICAL OF FUEL AND SAFE. We make them from THREE HORSE POWER UP. PRICES VERY LOW, quality considered. Special Engine Book mailed free to prospective buyers, stating their wants to

**JAMES LEFFEL & CO.**

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Grind  
They  
Last



# THE MILL

FOR THE  
Farmer, Stockdealer & Dairyman

who knows the economy  
and value of ground feed

## SCIENTIFIC GRINDING MILLS

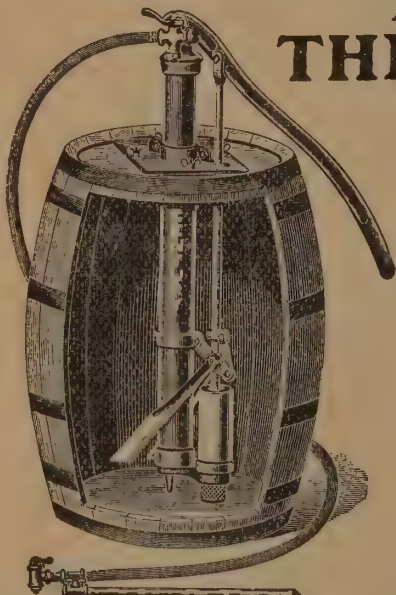
Being double action and triple geared, they grind fast and easy. Crush and grind ear corn, and all small grains singly or mixed. Special attachment for grinding Milo Maize and Kaffir Corn. Supply power for other purposes while grinding. Other styles horse and steam. Get our Catalogue 58, before you buy.

The Foos Mfg. Co., 1901 to 1905 McKinley Ave., Springfield, Ohio

# THE OLD CENTURY

IS OUT-OF-DATE

# THE NEW CENTURY SPRAYER



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orchard work is unrivaled.

HENION & HUBBELL, General Western Agents  
CHICAGO, ILLINOIS



# THE AMERICAN FARMERS' ALMANAC.



## 9th Month SEPTEMBER 30 Days

### MOON'S PHASES.

### NEW YORK.

### CHICAGO.

|                         |              |      |               |
|-------------------------|--------------|------|---------------|
| ☾ Last Quarter... 5d.   | 8h. 27m. mo. | 5d.  | 7h. 27m. mo.  |
| ☾ New Moon... 12d.      | 4h. 18m. ev. | 12d. | 3h. 18m. ev.  |
| ☾ First Quarter... 20d. | 8h. 33m. ev. | 20d. | 7h. 33m. ev.  |
| ☾ Full Moon... 28d.     | oh. 36m. mo. | 27d. | 11h. 36m. ev. |

| Day of Year. | Day of Month. | Day of Week. | Sun Rises.<br>H. M. | Sun Sets.<br>H. M. | Moon Rises.<br>H. M. | H. W.<br>N. Y.<br>H. M. |
|--------------|---------------|--------------|---------------------|--------------------|----------------------|-------------------------|
| 244          | 1             | SUN.         | 5 26                | 6 33               | 7 59                 | 10 3                    |
| 245          | 2             | Monday       | 5 27                | 6 31               | 8 38                 | 10 49                   |
| 246          | 3             | Tuesday      | 5 28                | 6 30               | 9 22                 | 11 40                   |
| 247          | 4             | Wednes.      | 5 29                | 6 28               | 10 13                | 0 8                     |
| 248          | 5             | Thursd.      | 5 30                | 6 26               | 11 9                 | 1 8                     |
| 249          | 6             | Friday       | 5 31                | 6 25               | morn                 | 2 12                    |
| 250          | 7             | Saturday     | 5 32                | 6 23               | 0 8                  | 3 21                    |
| 251          | 8             | SUN.         | 5 33                | 6 22               | 1 11                 | 4 26                    |
| 252          | 9             | Monday       | 5 34                | 6 20               | 2 14                 | 5 26                    |
| 253          | 10            | Tuesday      | 5 35                | 6 18               | 3 17                 | 6 20                    |
| 254          | 11            | Wednes.      | 5 36                | 6 16               | 4 20                 | 7 8                     |
| 255          | 12            | Thursd.      | 5 37                | 6 15               | 5 21                 | 7 47                    |
| 256          | 13            | Friday       | 5 38                | 6 13               | sets                 | 8 24                    |
| 257          | 14            | Saturday     | 5 39                | 6 12               | 6 50                 | 9 3                     |
| 258          | 15            | SUN.         | 5 40                | 6 10               | 7 21                 | 9 41                    |
| 259          | 16            | Monday       | 5 41                | 6 8                | 7 53                 | 10 13                   |
| 260          | 17            | Tuesday      | 5 42                | 6 7                | 8 29                 | 10 56                   |
| 261          | 18            | Wednes.      | 5 43                | 6 5                | 9 8                  | 11 38                   |
| 262          | 19            | Thursd.      | 5 44                | 6 3                | 9 54                 | 0 2                     |
| 263          | 20            | Friday       | 5 45                | 6 1                | 10 44                | 0 51                    |
| 264          | 21            | Saturday     | 5 46                | 6 0                | 11 38                | 1 45                    |
| 265          | 22            | SUN.         | 5 47                | 5 58               | morn                 | 2 42                    |
| 266          | 23            | Monday       | 5 48                | 5 56               | 0 37                 | 3 43                    |
| 267          | 24            | Tuesday      | 5 49                | 5 55               | 1 39                 | 4 42                    |
| 268          | 25            | Wednes.      | 5 50                | 5 53               | 2 45                 | 5 41                    |
| 269          | 26            | Thursd.      | 5 51                | 5 51               | 3 55                 | 6 34                    |
| 270          | 27            | Friday       | 5 52                | 5 50               | 5 6                  | 7 23                    |
| 271          | 28            | Saturday     | 5 53                | 5 48               | rises                | 8 7                     |
| 272          | 29            | SUN.         | 5 54                | 5 46               | 6 35                 | 8 56                    |
| 273          | 30            | Monday       | 5 55                | 5 45               | 7 13                 | 9 45                    |
| ....         | ...           | .....        | .....               | .....              | .....                | .....                   |

WEATHER.—The 1st—5th, variable; 6th—9th, fair and warm; 10th—14th, pleasant; 15th—19th, cloudy; 20th—25th, high winds and rain; 26th—30th, clear and cool.

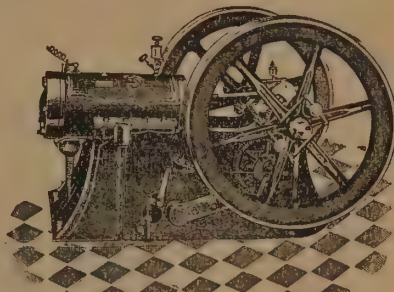
Bullfrog sort o' wink his eye—  
Good-by, Miss Summertime;  
He useter sing as you come by—  
Good-by, Miss Summertime;  
His voice it done got hah'd an' coarse,  
An' still it kep' a-gittin' worse,  
He sung so much dat he got hoarse—  
Good-by, Miss Summertime.

LIVE stock will live longer without food than without water.

GIVE the horses the best feed you can get. They work hard and should be well treated.

COLD, drafty barns are expensive. They cost feed, which is money, and health of animals, which is more money.

MODERN farming means a saving of time and labor, worry and discord. It means labor-saving machinery, scientific plowing, planting and fertilizing.



The Waterloo Gasoline Engine Co., manufacturers of Stationary, Portable and Pumping Gasoline Engines. Engines sold on their merits, and power guaranteed. Write for catalogue, terms and prices. THE WATERLOO GASOLINE ENGINE CO., Cedar St., Waterloo, Iowa.

# The "FAMOUS OHIO" Line

FOR

## 1901



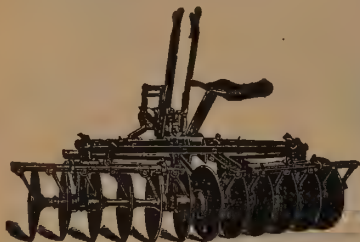
The Original Riding Cultivator



Five-Tooth Cultivator complete, with new Side Handle Braces



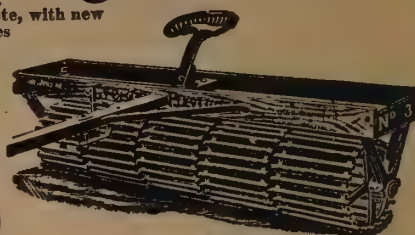
Our Regular Walker



The Bellevue Anti-Friction Disc Harrow

Stalk Cutters  
Bean Harvesters  
Steel Field Rollers  
Shovel Plows  
Corn & Cotton Planters  
Steel Lever Harrows  
Post-Hole Diggers  
Steel Shapes

Write for Latest Modern  
..Art Catalogue..



Our New Cyclone Pulverizer

**The OHIO CULTIVATOR CO., Bellevue, Ohio, U.S.A.**

THE FENCE THAT FENCES.

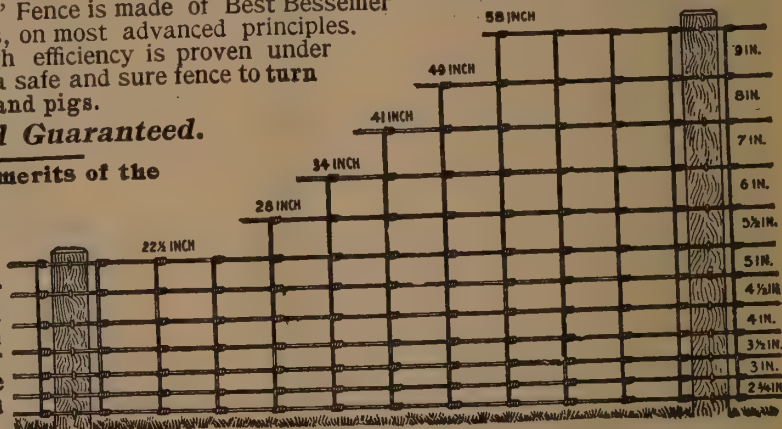
## AMERICAN ALL STEEL WOVEN WIRE FENCE

Large, strong wires heavily galvanized. Tension Curve at every intersection of main strands and stay wires, provides for expansion and contraction. The "American" Fence is made of Best Bessemer Steel Wires, on most advanced principles. Its thorough efficiency is proven under all circumstances as a safe and sure fence to turn cattle, horses, hogs and pigs.

**Every Rod Guaranteed.**

INVESTIGATE the merits of the  
**AMERICAN FENCE**

at our agency in your nearest town. If you can't find such an agency, write us for complete catalogue and we will see you are supplied.



AMERICAN FIELD FENCE, Regular Style, stays 12 or 6 ins. apart.

**AMERICAN STEEL & WIRE CO.,**

**CHICAGO AND  
NEW YORK**





THE OLD MILL IN HEART OF THE CITY OF ROTTERDAM.

### Prizes for Agricultural Students.

The following prizes are offered to students in the short course in agriculture at the University of Tennessee during the session from January 3 to March 14, 1901. These prizes will be awarded as the result of actual competition:

Five silver cups, valued at \$85, and \$50 in gold, awarded for proficiency in judging dairy cattle, Berkshire hogs, Southdown sheep, light horses, farm crops, etc.

Champion mower, value \$50, for proficiency in judging beef cattle.

Check rower corn planter, value \$40, for proficiency in feeds and feeding.

Disk corn cultivator, value \$35, for proficiency in breeds and breeding.

One ton of muriate of potash, value \$50, for proficiency in farm management and experimental research.

Disk harrow, value \$30, for proficiency in soil tillage and soil physics.

Thirty dollars in gold for proficiency in butter making, cheese making and dairy practice.

One set of the Rural Science Series, value \$12, for proficiency in dairy science and literature.

Twenty-five dollars in gold for the best essay showing the effect of nitrate of soda on garden crops.

Four tons of fertilizers, value \$25 each, for proficiency in horticulture, agricultural chemistry, meteorology and plant life and spraying.

Potato digger, value \$15, given as a second prize in horticulture.

Success anti-clog weeder, value \$10, given as second prize in plant life and spraying.

### Vital Interest of Forestry.

Few subjects are, or should be, of more interest to the country at large, especially to farmers, than that of forestry, which is the science of preserving the forests we have and replacing those destroyed. Many of the states have exhibited a revived interest in this matter and taken active steps to produce practical results. New York

has established a school of forestry. Berea College, in eastern Kentucky, in the midst of the great Appalachian forest, which is much the largest aggregation of trees in the country, has a department of forestry. Its purpose is to give young men an education that would not take them away from their mountain homes so much as it would fit them to remain there and develop the resources of the farm and of that region properly. In Pennsylvania, Wisconsin, Minnesota and other states there are movements toward a systematic development of forestry. It is a movement that must be made by all the states if they would escape in the future a calamity so great and widespread that its effects will be sufficient to ruin the country and check its civilization. Only by guarding the forests can the land be preserved in its full usefulness.

Every farmer that has a supply of muck on his farm should make arrangements to utilize it by incorporating it with manure or in his compost heap. This will be the more valuable if a part of his land is clayey and devoid naturally of humus.

When whole stalks are fed there is always some loss through the cows throwing them out of the manger and trampling on them. Cutting prevents all of this, and as quite a bunch can be run through a cutter in a few minutes, it pays to do it.

Full Circle and Reversible

## BALING PRESSES

Gem, All Steel

Full Circle



Positively the best value for your money. Send 3c for our complete catalogue. Address

**GEORGE ERTELS CO.,** 521 Kent St., Quincy, Ill.  
U. S. A.



### Common-Sense Farming.

While there is no question about specialty farming and intensity farming being most profitable, there is always danger of narrowing the specialties down so close that the failure of a crop means using up all available cash, if not running into debt. In any and all branches of farming the first principle is to produce on the farm, as far as possible, all the food needed by family and stock. This done, only the money crops are to be considered, and if two or three are properly studied they can be managed as well as a single specialty crop. Then, too, if stock is kept, the common-sense farmer will try and grow such crops as will be readily marketable, yet have some portion for stock food and leave the ground to be utilized either for a second market crop or a cattle food crop.

Thus, early peas will give a crop of vines for stock feeding and the ground can be put in turnips and afterwards seeded to winter rye, which will furnish an early spring green crop to the stock. As fast as the rye is cut the land may be sown to peas and oats for late green food if the pasture is likely to be scant, or to fodder corn or barley for fall feeding.

### Hay Curing.

Hay harvested in warm weather, with a sufficient amount of sap to furnish the moisture, will very soon begin to ferment. In this fermentation a portion of the moisture passes off in the form of vapor. The most common error in regard to the matter is in supposing that the process of barn-curing the hay can be hastened by opening the doors and windows and giving a free draft of air over the mows.

No greater mistake can be made, for the moisture which escapes from the hay rises through it in the form of a warm, invisible vapor, as the process of fermentation generates heat. Now if a draft of cooler air is passing over

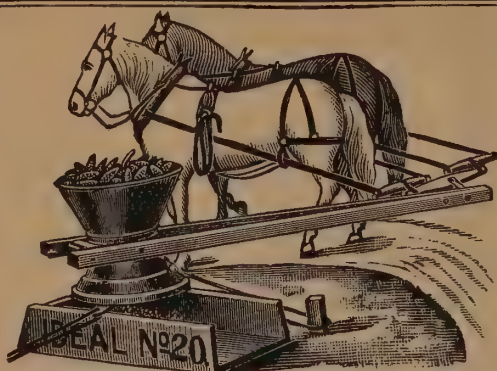
the hay its effect will be to condense some of the vapor, making the mow wet on the surface, and winter will show that the hay so wet is spoiled. Instead of throwing open the doors and windows the newly filled barn should be shut up as tightly as possible. If the siding is matched or battened, all the better; it is impossible to get it too tight. This will give the warm vapor a chance to rise and pass out of the roof. If very green hay is put in the barn it is well to top it with a good layer of straw. This would catch the wetting from the condensation and thus save the hay. As to how green hay should be when it is put in, that, of course, will be learned in course of time by experiment.

Moisture from water cannot be guarded against too carefully. A pound of water from rain or dew will do more injury than many pounds of the sap of the grass itself, though so far as we are informed the chemistry of this difference in effect is not yet known.

### Contagious Diseases.

When hog cholera or other contagious animal disease makes its appearance on the farm, the sick should at once be isolated in some place where dogs and poultry could not have access to them; attendants should not go among other animals, at least not with the same clothing they wear among the sick animals, and carbolic acid should be used freely wherever disinfection is needed. The well animals of a herd in which sickness has appeared had better be removed to new quarters, and it would be wise to wash them with a weak solution of carbolic acid.

If an animal dies from a contagious disease dig a hole six or seven feet deep and place quicklime on the bottom. Throw the carcass into the hole, cover it thickly with quicklime, and fill the hole with earth. There is trouble in doing all this, but heavy losses are averted.



## No. 20 IDEAL FEED MILL

Through perfect mechanical construction and improved methods of manufacture, the capacity of the No. 20 has been greatly increased over all forms of Geared Mills, so that it outgrinds them all. Get our catalogue giving full particulars and showing the most complete line on the market. Don't buy till you know what we have to offer.

**STOVER MANUFACTURING CO.**

557 RIVER ST., FREEPORT, ILL.

**S. & B**

**PRICE \$2.50**

**BEST ON EARTH**

**Post Hole Digger  
Self-dumping  
Rapid and Easy  
Implement**

## STANDARD FENCE MACHINES

Two styles. Nine regular sizes. Prices range from \$10 to \$22, delivered. Builds hog, chicken, cattle, horse or lawn fencing, wire ratchets, etc., for sale. Free printed matter.



**Eureka Fence Mfg. Co.**

720 N. 15TH ST., RICHMOND, IND.



# THOMAS HAY MACHINERY AND HARROWS

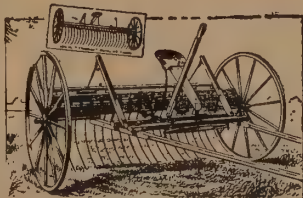
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STEEL WHEELS FOR  
FARM WAGONS  
ANY  
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TO FIT ANY SKEIN

ALL STEEL HANDY  
TRUCK WAGON....  
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**HAVANA METAL WHEEL CO.**

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**NO FARMER**

should be without either a

*Low  
Truck  
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or set of

**Steel Wheels**

We make both.

**Best and Cheapest** on the market... Straight or staggered spokes... Plain or grooved tire. **WRITE FOR PRICES.**

**HAVANA METAL WHEEL CO., Havana, Ill.**



# THE AMERICAN FARMERS' ALMANAC.



## 10th Month OCTOBER 31 Days

### MOON'S PHASES.

### NEW YORK.

### CHICAGO.

|                         |              |      |               |
|-------------------------|--------------|------|---------------|
| ☾ Last Quarter... 4d.   | 3h. 52m. ev. | 4d.  | 2h. 52m. ev.  |
| ☾ New Moon..... 12d.    | 8h. 11m. mo. | 12d. | 7h. 11m. mo.  |
| ☾ First Quarter... 20d. | 0h. 57m. ev. | 20d. | 11h. 57m. mo. |
| ☾ Full Moon..... 27d.   | 10h. 6m. mo. | 27d. | 9h. 6m. mo.   |

WEATHER.—The 1st—4th, variable; 5th—7th, high winds; 8th—12th, stormy; 13th—17th, clear and cool; 18th—23d, light frosts; 24th—27th, warm and fair; 28th—31st, mild and hazy.

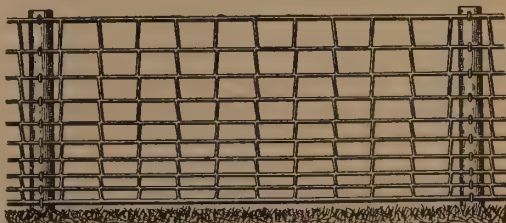
When earth's long summer toil is done,  
And bare and brown she's lying,  
Bereft of bud and bloom and sheaf,  
And autumn winds are sighing,  
'Tis then beneath the hazy skies,  
Where she lies sad and sober,  
Her riches rifled from her breast,  
There cometh bright October.

THE good cow is cheap at almost any price. The poor cow is dear as a gift. A poor cow will eat up the profits of two or three good cows.

THAT feed influences the flavor and quality of meat applies especially to mutton. This has been demonstrated by gardeners who have thrown to their flocks the tops and roots of celery.

| Day of Year. | Day of Month. | Day of Week. | Sun Rises.<br>H. M. | Sun Sets.<br>H. M. | Moon Rises.<br>H. M. | H. W.<br>N. Y.<br>H. M. |
|--------------|---------------|--------------|---------------------|--------------------|----------------------|-------------------------|
| 274          | 1             | Tuesday      | 5 56                | 5 43               | 8 7                  | 10 34                   |
| 275          | 2             | Wednes.      | 5 57                | 5 41               | 9 3                  | 11 27                   |
| 276          | 3             | Thursd.      | 5 58                | 5 40               | 10 3                 |                         |
| 277          | 4             | Friday       | 5 59                | 5 38               | 11 4                 | 0 57                    |
| 278          | 5             | Saturday     | 6 0                 | 5 37               | morn                 | 1 59                    |
| 279          | 6             | SUN.         | 6 1                 | 5 35               | 0 7                  | 3 2                     |
| 280          | 7             | Monday       | 6 2                 | 5 33               | 1 12                 | 4 3                     |
| 281          | 8             | Tuesday      | 6 3                 | 5 32               | 2 15                 | 4 59                    |
| 282          | 9             | Wednes.      | 6 4                 | 5 30               | 3 16                 | 5 50                    |
| 283          | 10            | Thursd.      | 6 5                 | 5 28               | 4 15                 | 6 35                    |
| 284          | 11            | Friday       | 6 6                 | 5 27               | 5 12                 | 7 17                    |
| 285          | 12            | Saturday     | 6 7                 | 5 25               | sets                 | 7 54                    |
| 286          | 13            | SUN.         | 6 8                 | 5 24               | 5 53                 | 8 32                    |
| 287          | 14            | Monday       | 6 9                 | 5 22               | 6 29                 | 9 11                    |
| 288          | 15            | Tuesday      | 6 11                | 5 21               | 7 7                  | 9 51                    |
| 289          | 16            | Wednes.      | 6 12                | 5 19               | 7 51                 | 10 30                   |
| 290          | 17            | Thursd.      | 6 13                | 5 18               | 8 38                 | 11 10                   |
| 291          | 18            | Friday       | 6 14                | 5 16               | 9 28                 | 11 57                   |
| 292          | 19            | Saturday     | 6 15                | 5 15               | 10 25                | 0 22                    |
| 293          | 20            | SUN.         | 6 16                | 5 13               | 11 25                | 1 13                    |
| 294          | 21            | Monday       | 6 17                | 5 12               | morn                 | 2 7                     |
| 295          | 22            | Tuesday      | 6 18                | 5 10               | 0 27                 | 3 6                     |
| 296          | 23            | Wednes.      | 6 19                | 5 9                | 1 32                 | 4 6                     |
| 297          | 24            | Thursd.      | 6 20                | 5 8                | 2 40                 | 5 4                     |
| 298          | 25            | Friday       | 6 22                | 5 6                | 3 51                 | 6 2                     |
| 299          | 26            | Saturday     | 6 23                | 5 5                | 5 4                  | 6 55                    |
| 300          | 27            | SUN.         | 6 24                | 5 3                | rises                | 7 45                    |
| 301          | 28            | Monday       | 6 25                | 5 2                | 5 55                 | 8 36                    |
| 302          | 29            | Tuesday      | 6 26                | 5 1                | 6 50                 | 9 30                    |
| 303          | 30            | Wednes.      | 6 27                | 5 0                | 7 50                 | 10 22                   |
| 304          | 31            | Thursd.      | 6 29                | 4 58               | 8 53                 | 11 14                   |

## FACTORY to FARM



**The Advance Woven Wire Fence** is sold DIRECT TO THE FARMER—Freight Paid. That saves him the dealer's commission, and we give him a fence that is cheap and better than the use of any HAND FENCE MACHINE MADE. THERE CAN'T BE A BETTER FENCE made for the money than this one. Prices way down. One small order will satisfy you on this point. Don't buy until you get our EXTRA SPECIAL DISCOUNT TO FARMERS.

**ADVANCE FENCE CO., 27 Old St., Peoria, Ill.**

## *A Postal Card*

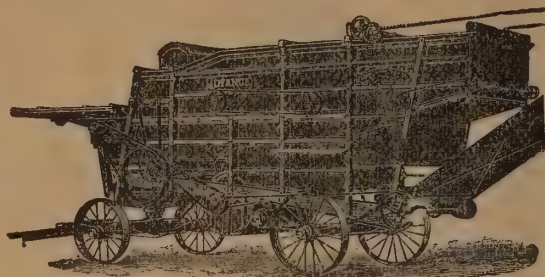
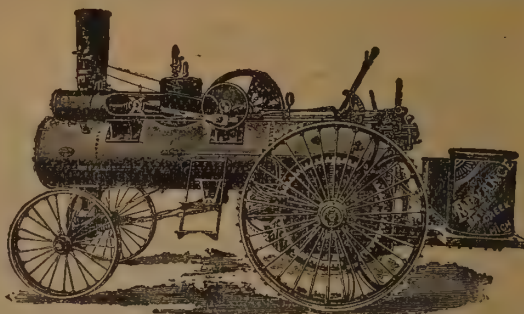
bearing your name and address, and that of five prospective purchasers of

### **THRESHING MACHINERY**

will bring you a handsome

## **LITHOGRAPH CALENDAR**

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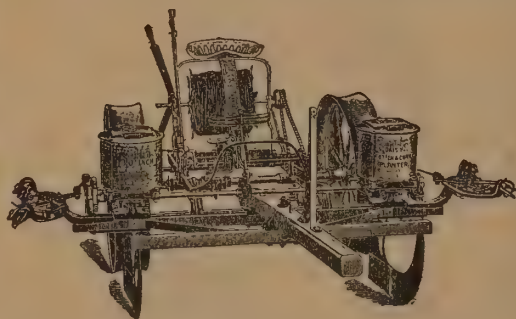


MENTION THIS ALMANAC

Send your names to the

**ADVANCE  
THRESHER CO.**

*Battle Creek  
Mich.*



**THE GALE PIVOT AXLE  
RIDING CULTIVATOR  
HAS WIDE DODGING CAPACITY.**

THE GANGS PIVOT FROM THE FRONT  
AND HAVE PATENT LEVELING LIFTS

CAN RUN WITH RIGID OR LOOSE LEVERS  
HAS NO EQUAL IN SIDE-HILL WORK

SPRING TEETH, SHOVELS, SPRING TRIP, AND  
EAGLE CLAWS ARE USED IN VARIOUS FORMS

Ask for our 1901 complete Catalogue  
of Farming Implements

PLEASE BEAR IN MIND THAT THE  
**DAISY COMBINED  
DROP PLANTER**

IS GUARANTEED TO CHECK  
AND DRILL PERFECTLY

IT IS HIGH GRADE AND HAS  
GREAT WEARING QUALITIES



**GALE MFG. CO.**

BRANCH HOUSES  
CONVENIENTLY  
LOCATED

**ALBION, MICHIGAN**  
Dep't X





THE GOSSIPS.

GEO. WEISS.

### Feeding Poor Hay.

In wintering stock on the left-over hay or the inferior grades that were not considered worthy of shipment, there is always the danger of under-feeding the animals, and thus working harm indirectly. It goes without saying that there is less nourishment in a ton of inferior hay than in the same amount of first-class, properly cured hay. Therefore if we give the usual quantity cattle will not get as much nourishment as if the hay was all first-class. Stock can eat only a certain amount of hay without causing bloating, and it is much more economical to increase the grain ration a little than the hay supply. With the poor hay mix enough bran to bring the nourishment of the ration up to about the same standard as the same quality of bright, full-length timothy hay. In this way the animals secure as much nourishment without adding any additional burden to their stomachs. Feed cattle through the winter when they have little exercise with coarse unnutritious food, and they will, in most cases, gain slowly, and very often develop stomach troubles before the winter is half over.

### Birds and Weeds.

The most important weeds which are prevented by birds from seeding are ragweed, pigeon grass, smartweed, bindweed, crab grass, lamb's quarters and pigweed. Birds are most actively engaged in feeding upon weed seeds during the winter months. The birds which are most effective in this work are about twenty species of sparrows and finches, horned larks, blackbirds, cowbirds, meadow larks, doves and quails. The English sparrow is reported as especially useful in destroying the seeds of crab grass and dandelion. The native sparrows are active in the destruction of the dandelion.

The common goldfinch is praised as an unusually valuable bird in this particular work. Horned larks are said

to feed to a considerable extent upon sorrel. The blackbirds are found to eat large quantities of the seed of wild sunflowers, sorrel, mustard, chickweed and thistle during the fall. The quail and mourning dove are also noted as weed destroyers. In the crop of one mourning dove were found 7,500 seeds of *Oxalis stricta*. About fifty species of birds are noted as destroyers of somewhat more than sixty species of weed.

Weeds of moderate size and growth will occupy as much ground, draw as much nutriment from it, take as much of the life-giving sunlight and of the food-bearing atmosphere as a good stalk of corn. It must be very rich and strong soil that can stand the full draught of two crops—one of weeds—and yet stint neither of them. The rays of sun so necessary to the life and growth of nearly all vegetation and of all crops come to the plants in direct lines, and if interrupted by the stalks or leaves of weeds cannot go around them to reach the plants. Hence we see the value of weed-destroying birds.

### Working Butter.

One of the greatest mistakes made by the average buttermaker on the farm is in working the butter too much. If the churning has been properly done and stopped when the butter is in the granular form, it will not be necessary to work the butter to get out the water. The main object in working is to get the salt evenly distributed, and when that is done the butter is worked enough.

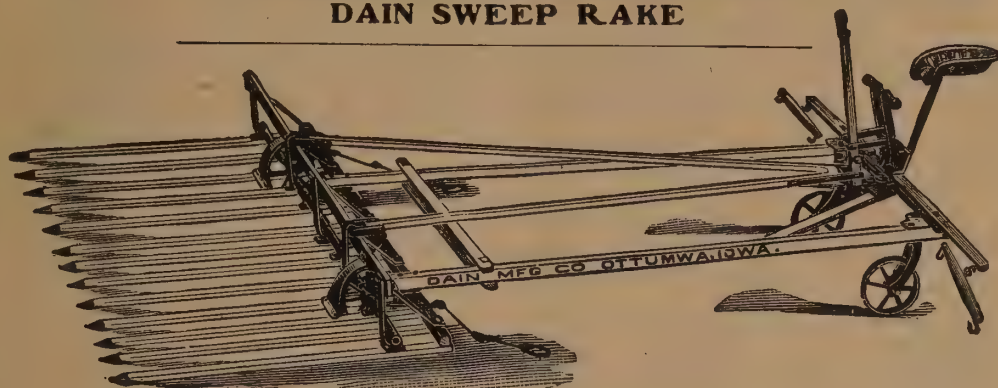
Much of the mortality among swine is due to various ailments induced by indigestion; often the result of an exclusive corn diet. Grass, shorts, pea meal, turnips, carrots, mangles, sugar beets, potatoes and artichokes are all good, healthy, economical hog feeds, and the more the hog receives the healthier he will be.



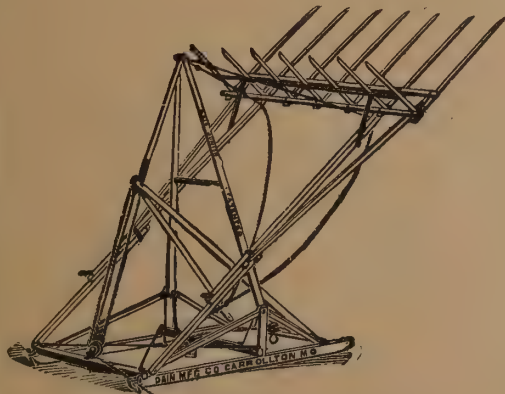
# These are the Goods FOR 1901



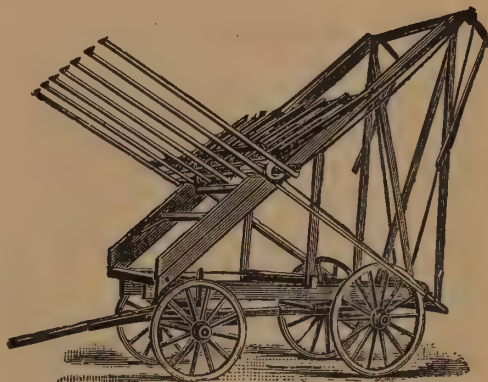
**DAIN SWEEP RAKE**



**DAIN POWER LIFT RAKE**



**Dain Junior Hay Stacker**



**Dain Automatic Hay Stacker**

## **Dain Manufacturing Co**

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**OTTUMWA, IOWA**

IF YOUR PASTURES AND FIELDS ARE INCLOSED WITH THE

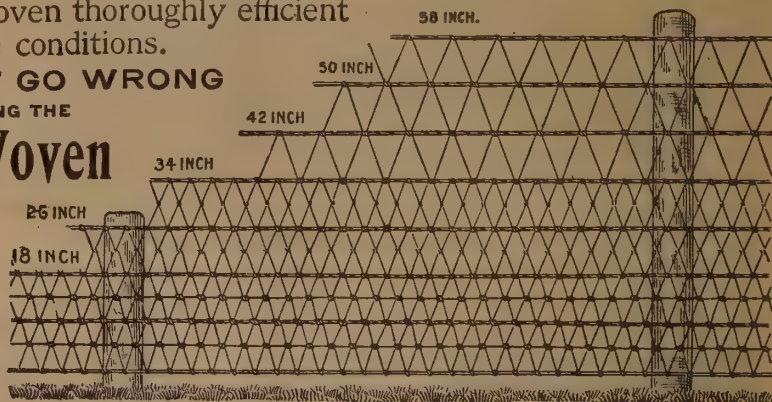
# ELLWOOD ALL STEEL WOVEN WIRE FENCE

**E** you have secured absolute efficiency at least expense, in a practical fence that will positively turn cattle, horses, hogs and pigs. A fence that is strong, practically everlasting, proven thoroughly efficient under all possible conditions.

**YOU CAN'T GO WRONG  
IN SELECTING THE**

## Ellwood Woven Fence.

Sold by our agents in every town. If you can't get it in your town, write us direct, and we will see that you are supplied.



ELLWOOD FIELD FENCE. (Standard Style.)

**AMERICAN STEEL & WIRE CO.,** CHICAGO AND NEW YORK



**WE ARE STILL MAKING PUMPS  
AS WE HAVE FOR THIRTY-EIGHT YEARS**

You know how **good** they are. We make other **good** things, among them the

### "PEERLESS" WAGON SCALES

No one makes a better. We want you to know how **good** they are by trying one. We stand all expense if they don't fulfill our guaranty.

### "ELI" TWO-ROW CORN PLANTER

Will not miss a hill or break a kernel. Simplest and most accurate drop made. No plates. Changed from hill to drill in thirty seconds.

### BARTLETT THREE-ROW CORN PLANTER

A planter that plants three rows at once, hill or drill drop, mechanically perfect, a beauty in appearance, light in weight and draft.

**YOUR DEALER OUGHT TO HAVE THEM. IF HE HASN'T, SEND US HIS NAME ON A POSTAL AND RECEIVE A PRESENT FOR YOUR TROUBLE**

**MOLINE PUMP CO.**

360 TWENTIETH ST.

MOLINE, ILLINOIS





# THE AMERICAN FARMERS' ALMANAC.

# NOVEMBER



## 11th Month NOVEMBER 30 Days

| MOON'S PHASES.        | NEW YORK.         | CHICAGO.         |
|-----------------------|-------------------|------------------|
| ☾ Last Quarter... 3d. | 2h. 24m. mo.      | 3d. 1h. 24m. mo. |
| ☾ New Moon.....1rd.   | 2h. 34m. mo. 1rd. | 1h. 34m. mo.     |
| ☾ First Quarter...19d | 3h. 23m. mo. 19d. | 2h. 23m. mo.     |
| ☾ Full Moon.....25d.  | 8h. 17m. ev. 25d. | 7h. 17m. ev.     |

| Day of Year. | Day of Month. | Day of Week. | Sun Rises. H. M. | Sun Sets. H. M. | Moon Rises. H. M. | H. W. N. Y. H. M. |
|--------------|---------------|--------------|------------------|-----------------|-------------------|-------------------|
| 305          | 1             | Friday       | 6 30             | 4 57            | 9 59              |                   |
| 306          | 2             | Saturday     | 6 31             | 4 56            | 11 4              | 0 39              |
| 307          | 3             | SUN.         | 6 32             | 4 55            | morn              | 1 37              |
| 308          | 4             | Monday       | 6 33             | 4 54            | 0 7               | 2 33              |
| 309          | 5             | Tuesday      | 6 35             | 4 52            | 1 9               | 3 29              |
| 310          | 6             | Wednes.      | 6 36             | 4 51            | 2 8               | 4 23              |
| 311          | 7             | Thursd.      | 6 37             | 4 50            | 3 6               | 5 13              |
| 312          | 8             | Friday       | 6 38             | 4 49            | 4 3               | 6 1               |
| 313          | 9             | Saturday     | 6 39             | 4 48            | 5 0               | 6 45              |
| 314          | 10            | SUN.         | 6 41             | 4 47            | 5 58              | 7 26              |
| 315          | 11            | Monday       | 6 42             | 4 46            | sets              | 8 4               |
| 316          | 12            | Tuesday      | 6 43             | 4 45            | 5 47              | 8 44              |
| 317          | 13            | Wednes.      | 6 44             | 4 44            | 6 34              | 9 27              |
| 318          | 14            | Thursd.      | 6 45             | 4 43            | 7 24              | 10 7              |
| 319          | 15            | Friday       | 6 46             | 4 43            | 8 19              | 10 47             |
| 320          | 16            | Saturday     | 6 48             | 4 42            | 9 16              | 11 31             |
| 321          | 17            | SUN.         | 6 49             | 4 41            | 10 16             |                   |
| 322          | 18            | Monday       | 6 50             | 4 40            | 11 18             | 0 43              |
| 323          | 19            | Tuesday      | 6 51             | 4 40            | morn              | 1 35              |
| 324          | 20            | Wednes.      | 6 53             | 4 39            | 0 23              | 2 30              |
| 325          | 21            | Thursd.      | 6 54             | 4 38            | 1 30              | 3 29              |
| 326          | 22            | Friday       | 6 55             | 4 38            | 2 39              | 4 30              |
| 327          | 23            | Saturday     | 6 56             | 4 37            | 3 51              | 5 31              |
| 328          | 24            | SUN.         | 6 57             | 4 37            | 5 4               | 6 31              |
| 329          | 25            | Monday       | 6 58             | 4 36            | 6 17              | 7 27              |
| 330          | 26            | Tuesday      | 6 59             | 4 36            | rises             | 8 18              |
| 331          | 27            | Wednes.      | 7 0              | 4 35            | 6 33              | 9 16              |
| 332          | 28            | Thursd.      | 7 1              | 4 35            | 7 41              | 10 8              |
| 333          | 29            | Friday       | 7 2              | 4 35            | 8 48              | 10 56             |
| 334          | 30            | Saturday     | 7 3              | 4 34            | 9 54              | 11 48             |

WEATHER.—The 1st—7th, warm and hazy; 8th—12th, variable; 13th—17th, sleet and rain; 18th—22d, cloudy; 23d—27th, clear and cold; 28th—30th, occasional snow flurries.

What's that? Sorry winter's comin'?  
Wish it never would appear?  
Findin' fault and lookin' gloomy—  
Want it summer all the year?  
But, say! just look about yer,  
See the good things stored away  
For the good times in the winter,  
An' then what will yer say?

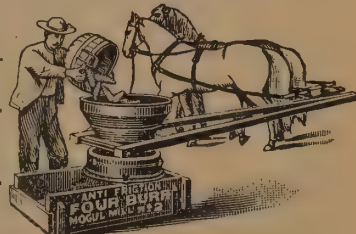
DEAD weeds look no better than live ones standing over a farm.

A POUND of pig flesh is produced more cheaply before the pig is six months old than is possible at any other time afterward.

EVERY work horse should have his own collar, and not change them about, as some farmers do. An ill-fitting collar is often the prime cause of horses being balky.

## The Old Reliable Anti-Friction 4-BURR MOGUL MILLS

No gearing.  
No friction.  
Thousands in use. Four-horse mill grinds 60 to 80 bushels per hour; two-horse mill grinds 30 to 50 bushels per hour.  
We make a full line of



FEED MILLS, best ever sold, including the Famous Iowa Mill No. 2 for \$12.50  
Also Feed Steamers, Farm Boilers and Tank Heaters. Send for free catalogue.

Manufactured and sold by the  
**IOWA GRINDER & STEAMER WORKS**  
WATERLOO, IOWA

## KEYSTONE QUICK HAYING MACHINES.



Rakes wide,  
fast and clean

Takes up no trash, that means clean hay.

**Keystone Side-Delivery Rake**  
means "Quick Haying, Quality Prime." Turns the hay completely and leaves it in a light, loose windrow ready for loader. Its use means air-cured, not sun bleached hay. Better than a Sully Rake and saves use of tedder.

### Keystone Hay Loader.

Loads the hay from the windrow or cock, or direct from the ground if the hay is heavy. Takes the hay up clean but takes up no manure, rubbish, &c. It makes haying quick and easy. In showery weather it often saves enough to pay for itself in one day. Loads a wagon in 5 minutes.



Made entirely of steel and iron. Horse power only. Mounted on steel wheels, and stands on the wheels when operating.

Write for our special circulars fully describing these machines.

### Keystone Three Feed Hay Press.



Horses move in a full circle. Each revolution moves the plunger three times—one more feed than any other press made. Requires no more men but increases capacity beyond comparison.

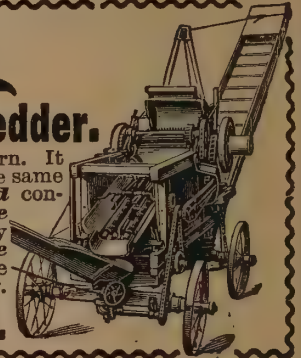
**KEYSTONE MANUFACTURING CO. 203 RIVER ST., STERLING, ILL.**

## "KEYSTONE"

### Corn Husker and Fodder Shredder.

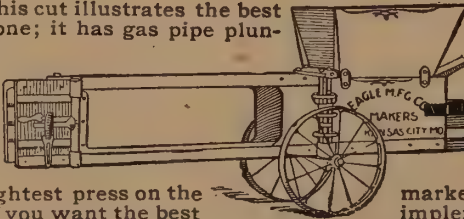
This is the machine that has revolutionized the harvesting of corn. It husks the corn clean and delivers it into a wagon or bin and at the same time shreds the fodder. *The Double Spiral Shredder head* converts the fodder into a fine, soft, long substance called "Keystone Corn Hay." It is readily eaten by live stock, can be as easily baled as hay and sold in the city market. *It saves the entire corn crop—no waste.* Made in three sizes. We make a full line of corn machinery. Get our free illustrated catalogue before buying.

**Keystone Mfg. Co. 203 River St., Sterling, Ills.**



## THE EAGLE HAY PRESS.

This cut illustrates the best none; it has gas pipe plunger.



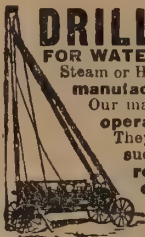
All-Steel Hay Press on the market—we except ger, very large feed opening, very simple power,



lightest press on the market, and has the greatest capacity. If you want the best implement on wheels, correspond with the

market, and has the greatest capacity. implement on wheels, correspond with the

**EAGLE MFG. COMPANY, Kansas City, Mo.**



### DRILLING MACHINERY

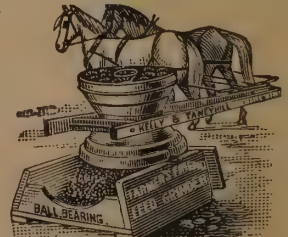
FOR WATER, GAS and MINERAL PROSPECTING. Steam or Horse Power. We are the oldest and largest manufacturers of Drilling Machinery in this country. Our machines are faster, stronger and easier to operate than any other machine on the market. They are no experiment. Thousands are in successful operation. Special attention given repair work. Send for Free illustrated catalogue to

The Kelly, Taneyhill & Woodruff Co., Waterloo, Iowa.

MANUFACTURERS OF

*Farmer's Friend*

Ball-Bearing  
Feed  
Grinders  
and



**Waterloo Steel Frame Stone Pullers**

...Write for Catalogues...

**KELLY, TANEYHILL & WOODRUFF CO., WATERLOO, IOWA.**





THE RETURN OF THE HERD.

VUILLEFROY.

**Hon. Lewis Miller.**

INVENTOR OF THE MOWING MACHINE.

The death of Hon. Lewis Miller, of Akron, O., on February 17, 1899, removed from the American agricultural implement industry the one man whose inventions have borne the most important part in the development of the agricultural implement manufacturing and farming resources of America. Indeed, his inventive genius has served the people of the globe, for Buckeye mowing and reaping machines have been in world-wide use for many years past.

Mr. Miller was the actual inventor of the perfected mowing machine. His first Buckeye mower won the sweepstakes victory in a field trial of reapers, mowers and harvesting implements held at Syracuse, N. Y., by the United States Agricultural Society July 13-20, 1857, where it met in competition every machine in that line then made in America. The precedence secured at that time has been maintained by the manufacturers of the Buckeye machine, and certain parts of their mowers and harvesters, as devised by Mr. Miller over forty years ago, are in general use by other manufacturers, with no present prospect that these devices will be superseded. In fact, it is stated confidently by expert machinists that any mowers or reapers devoid of Mr. Miller's attachments and not constructed on the principles evolved by him, could not be sold in any part of the world at this time for aught save scrap iron.

Important advantages of this first Buckeye were the reducing of the draft on the horses by the use of two wheels of equal size, getting the power from gearing on the hub and having the flexible cutting bar in front of the driver instead of behind him, so he could watch it from his seat without continually turning his head backwards. These and other principles of the mower Mr. Miller applied speedily

to reaping and binding machines, and soon the firm became a leader in the manufacture of harvesting machinery.

Mr. Miller exerted his inventive powers as well to devise improvements upon the various machines in use in the firm's plants, by which it is now estimated the present force of workmen in the Buckeye shops can turn out as many completed agricultural implements as double or treble the number of workmen could without these appliances.

Mr. Miller was connected with three plants: C. Aultman & Co., of Canton, Ohio, Aultman, Miller & Co., of Mansfield, and Aultman, Miller & Co., of Akron, to which plant Mr. Miller gave his personal attention. He built the Aultman, Miller & Co. manufactory in 1863, and was its superintendent till the end of his life.

It is a pleasure to record the fact that Mr. Miller was a munificent dispenser of the good fortune secured by his ability and untiring energy. He was a generous contributor to educational, charitable and religious enterprises. He was the founder of the Chautauqua Assembly and the president from its organization to the time of his death. He was at one time president of the Sunday School Union and was for many years a member of the Akron School Board. He was a trustee, president and benefactor of Mount Union College.

Mr. Miller's ancestors emigrated from Germany and settled in Pennsylvania in the time of William Penn. His father moved to Ohio in 1812 and Lewis was born at Greentown August 24, 1829. Of his own family Mr. Miller left many to mourn his loss. His wife and nine children survive him. One of his daughters is the wife of Edison, the electrician.

Hon. George W. Crouse, the president of the Aultman, Miller & Co. (corporation of Aultman, Miller & Co.) in concluding a touching tribute to his deceased partner at the memorial services, said: "When the record is made



up, based upon the greatest amount of good to the greatest number, and when the books are balanced by the rule of the extent and degree that the world was made better by having lived in it, the name of Lewis Miller will be written in conspicuous letters at the top of the page."

### **The Necessity for Deep-Bored Wells.**

It is within only a few years, comparatively, that the importance of pure drinking water has been understood and the fact that impure water is often the cause of disease. While this is now generally conceded regarding human beings, the necessity of pure water for animals is not so widely recognized. As the water drunk is absorbed directly into the blood and with it all the impurities that are dissolved in it, and many of those not dissolved, but suspended in it on account of their exceedingly small bulk, the water must be pure or it becomes a source of infection and produces disease.

Frequently wells, from which the water used for drinking purposes is taken, are near some polluting source that makes the water anything but wholesome. Often decayed vegetable or animal matter may be found adjacent to many farm dwellings, the germs from which are inhaled by those living on the farm, and these germs also find their way into the water supply. Hence the need of procuring that supply from a depth that is below the level of contamination, for shallow well water is liable for several causes to be polluted. As a rule shallow wells are not thoroughly constructed, consequently impurities enter easily from the top, and in addition surface water, which makes its way into the well, is apt to be charged with impurities gathered up near dwellings, barns and other buildings, and, owing to the small amount of earth through which it has to filter, these impurities are

not oxidized and thus destroyed before they reach the water in the well. The water of deep wells, on the other hand, has to pass through thick layers of earth, sand and gravel before it reaches the bottom of the well; the organic matter which it carried in suspension and solution has become oxidized and converted into harmless nitrates.

In most localities the ordinary brook should never be depended on as the water supply for the cattle. There are few times in the year when it is safe for them to drink from it, if the dairyman wants to keep both animals and animal products pure. In the mid-summer especially it is a positive detriment to the dairy business.

To illustrate the importance of pure water an authority on that dread disease, hog cholera, advises that a herd, to protect them from contagion, should be taken to a piece of high and dry ground, free from any rubbish, and should there receive clean food and no water except as is freshly drawn from a deep well, thus not giving the germ a chance to gain a foothold. Under no circumstances should they be allowed access to a running stream or stagnant pool.

### **Oil for Bad Roads.**

One Iowa farmer has apparently solved the good-road question by the use of crude oil. He was led to try it by reading that a bad piece of road in a Pennsylvania town, impassable during spring and fall rains, became hard and dry after the leakage of an oil pipe near by. Sending to the Standard Oil Company, he was given a tank of one hundred and thirty gallons of crude oil, eight of which were tried on a very bad piece of road near Keokuk with satisfactory results. He found a barrel of crude oil, costing ninety cents at the wells, was sufficient for a strip of road one hundred feet long and twelve feet wide. It forms a hard crust which sheds water.

# FOOS GAS and GASOLINE ENGINES

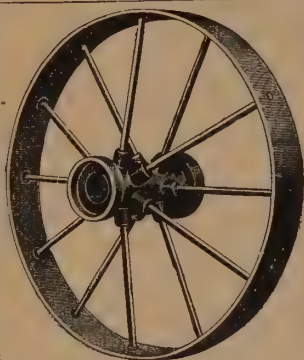
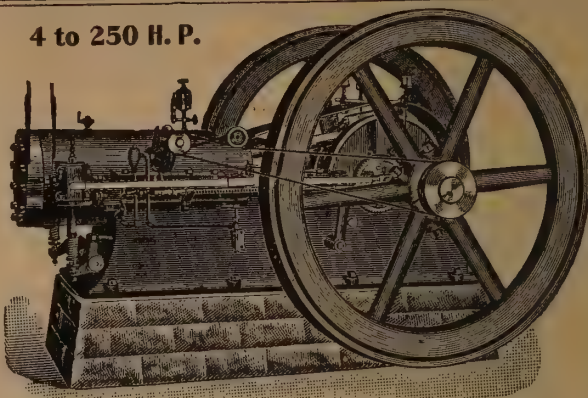
High-Grade Engines for all Power Purposes

LARGEST EXCLUSIVE GAS ENGINE  
FACTORY IN AMERICA

SEND FOR CATALOGUE G

**FOOS GAS ENGINE CO.,**  
BOX 157, SPRINGFIELD, OHIO

4 to 250 H. P.



## METAL WHEELS FOR FARM WAGONS

Wheels of all sizes  
Tires of all widths

ADDRESS FOR CIRCULAR AND PRICES

**Quincy Corn Planter Co.**  
QUINCY, ILLINOIS

Who also manufacture Barlow Corn Planters, Corn Dri IIs, Check-Rowers  
and Fertilizer Attachments.



SIMPLE  
REMEMBER THE NAME  
FULLY GUARANTEED

**X·X·X**

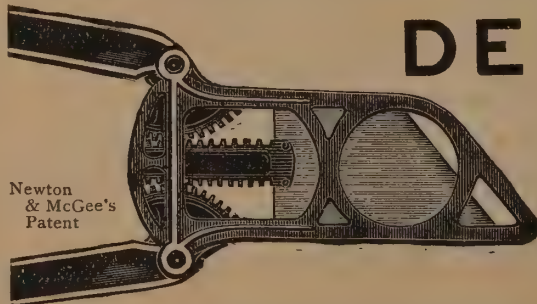
SUBSTANTIAL  
ACCEPT NO OTHER....  
RIDES LIKE A BUGGY

Special Inducements  
to Dealers and Jobbers

**Belle City Bolster Spring Co.** BOX 155  
..RACINE, WIS..

**DEHORNING CATTLE** WITHOUT PAIN  
IS ACCOMPLISHED BY THE

# DEHORNERS



Newton  
& McGee's  
Patent

Sold by us. Indorsed by the U. S. and Canadian  
governments and the most successful stock raisers.  
If not sold by your dealer, write for circulars and  
prices to the manufacturers.

**H. H. BROWN MFG. CO.**  
DECATUR, ILL.





## 12th Month DECEMBER 31 Days

### MOON'S PHASES.

### NEW YORK.

### CHICAGO.

|                        |              |      |              |
|------------------------|--------------|------|--------------|
| ☾ Last Quarter... 2d.  | 4h. 49m. ev. | 2d.  | 3h. 49m. ev. |
| ☾ New Moon.....10d.    | 9h. 53m. ev. | 10d. | 8h. 53m. ev. |
| ☾ First Quarter...18d. | 3h. 35m. ev. | 18d. | 2h. 35m. ev. |
| ☾ Full Moon.....25d.   | 7h. 16m. mo. | 25d. | 6h. 16m. mo. |

| Day of Year. | Day of Month. | Day of Week. | Sun Rises.<br>H. M. | Sun Sets.<br>H. M. | Moon Rises.<br>H. M. | H. W.<br>N. Y.<br>H. M. |
|--------------|---------------|--------------|---------------------|--------------------|----------------------|-------------------------|
| 335          | 1             | SUN.         | 7 4                 | 4 34               | 10 57                | 0 14                    |
| 336          | 2             | Monday       | 7 5                 | 4 34               | 11 59                | 1 5                     |
| 337          | 3             | Tuesday      | 7 6                 | 4 33               | morn                 | 1 56                    |
| 338          | 4             | Wednes.      | 7 7                 | 4 33               | 1 0                  | 2 49                    |
| 339          | 5             | Thursd.      | 7 8                 | 4 33               | 1 58                 | 3 41                    |
| 340          | 6             | Friday       | 7 9                 | 4 33               | 2 56                 | 4 32                    |
| 341          | 7             | Saturday     | 7 10                | 4 33               | 3 53                 | 5 22                    |
| 342          | 8             | SUN.         | 7 11                | 4 33               | 4 49                 | 6 11                    |
| 343          | 9             | Monday       | 7 12                | 4 33               | 5 43                 | 6 57                    |
| 344          | 10            | Tuesday      | 7 13                | 4 33               | 6 35                 | 7 38                    |
| 345          | 11            | Wednes.      | 7 14                | 4 33               | sets                 | 8 20                    |
| 346          | 12            | Thursd.      | 7 15                | 4 33               | 6 13                 | 9 4                     |
| 347          | 13            | Friday       | 7 16                | 4 33               | 7 10                 | 9 46                    |
| 348          | 14            | Saturday     | 7 16                | 4 34               | 8 9                  | 10 25                   |
| 349          | 15            | SUN.         | 7 17                | 4 34               | 9 10                 | 11 6                    |
| 350          | 16            | Monday       | 7 18                | 4 34               | 10 13                | 11 51                   |
| 351          | 17            | Tuesday      | 7 18                | 4 34               | 11 17                | 0 15                    |
| 352          | 18            | Wednes.      | 7 19                | 4 35               | morn                 | 1 4                     |
| 353          | 19            | Thursd.      | 7 20                | 4 35               | 0 22                 | 1 57                    |
| 354          | 20            | Friday       | 7 20                | 4 36               | 1 30                 | 2 58                    |
| 355          | 21            | Saturday     | 7 21                | 4 36               | 2 40                 | 4 1                     |
| 356          | 22            | SUN.         | 7 21                | 4 37               | 3 51                 | 5 7                     |
| 357          | 23            | Monday       | 7 22                | 4 37               | 5 2                  | 6 11                    |
| 358          | 24            | Tuesday      | 7 22                | 4 38               | 6 10                 | 7 12                    |
| 359          | 25            | Wednes.      | 7 22                | 4 38               | rises                | 8 4                     |
| 360          | 26            | Thursd.      | 7 23                | 4 39               | 6 24                 | 8 59                    |
| 361          | 27            | Friday       | 7 23                | 4 40               | 7 33                 | 9 49                    |
| 362          | 28            | Saturday     | 7 23                | 4 40               | 8 40                 | 10 34                   |
| 363          | 29            | SUN.         | 7 24                | 4 41               | 9 45                 | 11 17                   |
| 364          | 30            | Monday       | 7 24                | 4 42               | 10 47                |                         |
| 365          | 31            | Tuesday      | 7 24                | 4 42               | 11 48                | 0 28                    |

WEATHER.—The 1st—4th, clear and cold; 5th—9th, snow and sleet; 10th—14th, very cold; 15th—19th, variable; 20th—25th, flurries of snow; 26th—31st, clear and cold.

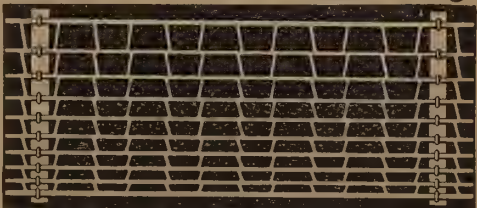
Now let the spark of love flame forth,  
Spread all its grandeur o'er your way,  
And bells ring out their chiming notes,  
On gladsome Christmas Day.

With what a royal robe it comes  
In semblance of a higher power,  
To bring your fondest wish of joy  
This glorious Christmas hour.

GIVE your stable a thorough cleaning occasionally. It will more than repay you in way of appearance, and be beneficial in a sanitary way.

SELECT the cows for a special purpose. If you expect butter from cows, secure butter-producing cows, not beefy ones.

## Save Your Money



by buying your FENCE DIRECT FROM THE FACTORY AT WHOLESALE PRICE—Freight Paid. That's the way we sell the

### Advance Fence

It is as good as the best woven wire fence made, and this plan of selling it makes it cheaper and better in every way than the use of any hand fence machine made. It is all interwoven—there are no loose ends. The wires can not slip. It can not kink or sag, and takes up its own expansion and contraction. Don't buy until you get our new circulars and special discount to farmers.

ADVANCE FENCE CO., 27 Old St., Peoria, Ill.

# The Rock Island Hay Rake and Loader



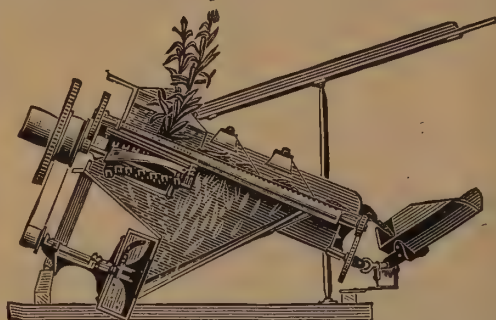
ALWAYS HAS BEEN  
IS NOW  
AND WILL CONTINUE  
TO BE

**THE BEST**

TAKE NO OTHER  
Send for Circulars

**Rock Island Plow  
Co. Rock Island, Ill.**

## HUSK, CUT AND SHRED CORN



all at one operation, **quickly,**  
**safely, cheaply,** with the

**CYCLONE  
CORN HUSKER**

A three-horse tread or six-horse sweep  
power does it easily. **Saves time, money,**  
**and feed.** Circulars and Prices free  
upon request. ... *Agents Wanted.*

**ROSENTHAL HUSKER CO.** **Box A**  
**MILWAUKEE, WIS.**



**THE DAVENPORT "WIRELESS"  
PERFECTED FOR 1901**

Don't buy a planter until you have examined  
the Davenport "Wireless" as improved for  
1901. Don't be influenced by others. **IN-**  
**VESTIGATE IT YOURSELF. YOU ARE**  
**THE MOST COMPETENT JUDGE.** If you  
have used a "Wireless," the more readily  
you will admit, as hundreds of others have,  
that it is the most complete and successful  
planter made. Our friends number 1,000 to 1  
more to-day than a year ago.

Write for particulars to

**THE IMPLEMENT MANUFACTURING COMPANY**

**DAVENPORT, IOWA**  
**DEPARTMENT W**

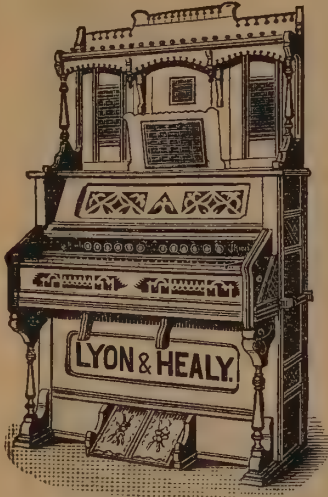




WINTER.

LOUIS CYROL

# Wonderful Values IN PARLOR ORGANS



The world's largest music house, Lyon & Healy of Chicago, to sharply reduce stock, is offering unprecedented values. Fine Lyon & Healy Organs formerly bringing \$65, now \$35; Organs formerly \$75, now \$42.50.

## *Note how this Organ is Made.*

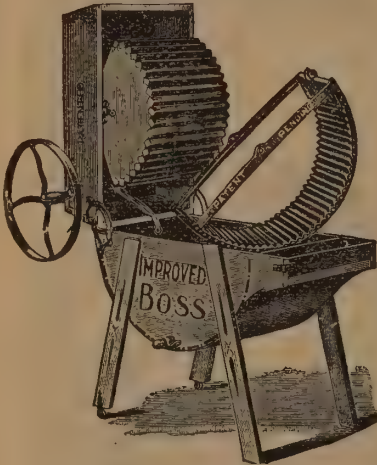
It has 5 full octaves and 11 stops; the action contains 2 full sets of reeds, embracing 122 reeds in all. The 11 stops are as follows: Principal, Diapason, Dulciana, Principal-forte, Diapason-forte, Cremona, Melodia, Celeste, Vox Humana, Treble Coupler, and Bass Coupler. These are capable of producing the greatest possible varieties of tone with various degrees of modulation. There are no "blind stops" on this organ; they are all active and important. There is also a Knee Swell and a Grand Knee Stop. The case is a model of neatness and beauty and is made of finely finished solid oak. It is 69 inches high, 23 inches deep and 43 inches wide. We make the terms of payment so easy that anybody can buy one. Ask your dealer for our *Parlor Organ Style 100*. If he does not have it write direct to us and we will see that you are supplied. *Catalogue of Parlor and Church Organs FREE.*

Used Organs from \$10 up. The freight on an organ is a very small matter. We ship organs everywhere. Remember, when you buy an organ from us, genuine musical worth is assured. Be careful to avoid the imitations now on the market.

Don't fail to write to-day for bargain.

**LYON & HEALY, 49 Adams St., CHICAGO**

TRADE-MARK



# "BOSS" Washing Machine

**WITH STEEL FRAME CYLINDER.**

Allowing 2½ inches more space for clothes, giving a better circulation of water through the clothes thereby cleansing them more thoroughly than by any other washer.

Should your dealer not have the washer in stock, then have him secure for you a "BOSS" Washer, or write direct to us for prices and circular "E." Do not purchase any other than "BOSS" brand, for if you do you will not have the genuine and best washer.

**Manufacturers:**

**BOSS WASHING MACHINE CO.**

**P. O. Station H, Cincinnati, Ohio.**

**R. R.  
Donnelley  
& Sons Co**

The Lakeside Press

PRINTERS OF

## Agricultural Catalogues

Have you seen the 1901 Catalogues of  
KINGMAN PLOW CO., PARRY MFG. CO., PLANO  
MFG. CO., or the WM. DEERING & CO.'S?  
These are recent productions of ours.

**THE LAKESIDE PRESS BUILDING, CHICAGO, ILL.**



### **Begin Haying in Good Time.**

We know an incident of a forehanded farmer who surprised his neighbors when he met them at the village store and postoffice one winter day, when the snow blocked the roads, by informing them that he had begun haying that day. He explained that he had improved his time by taking mowing machine and hay rake apart, examining every bolt and nut to see if they were in order, and sending to the dealer for all parts that he thought needed replacing, and deciding upon certain new implements of which he could foresee the necessity. Many farmers make no preparations ahead. They take the busy time to do what might have been done six months earlier, or they begin without proper implements and then lose time afterward, because of breakdowns and hindrances which are sure to always come in the most inconvenient time.

### **Irregular Milking.**

The Oregon Agricultural College and Experiment Station a year or so ago instituted a series of experiments to know exactly what was the loss through irregular milking. The experiment was as follows:

Six cows were divided into two lots, so that the average age of the cows and period of lactation, also total yield of milk, was practically the same kind and amount of feed, but the cows in lot 1 were fed and milked regularly at 2:30 p. m. and 5:30 a. m., while those in lot 2 were fed and milked at hours ranging from 5 to 7 a. m. and 4 to 6 p. m. A comparison of the milk yield for three weeks, under this arrangement, with the three weeks preceding showed that the cows in lot 1 made a gain in yield of 5.9 per cent, while those in lot 2 decreased in yield 4.4 per cent. Assuming that the cows in lot 2 would have done as well as those in lot 1 if they had the same treatment, which is highly probable, we find a loss of practically ten per cent

in the milk yield during three weeks, due to irregularity in milking and feeding. The loss, however, was confined to the milk yield, as there was practically no change in the quality of milk during the test period.

The dairy cow is a good timekeeper and knows very well when milking time comes. If she is neglected and allowed to go far beyond the regular time she begins to worry, and loss follows.

### **Care of Calves.**

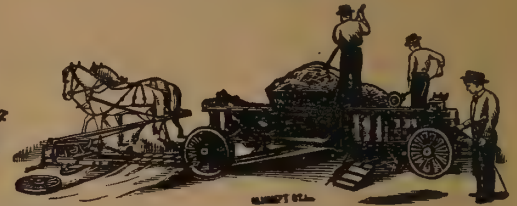
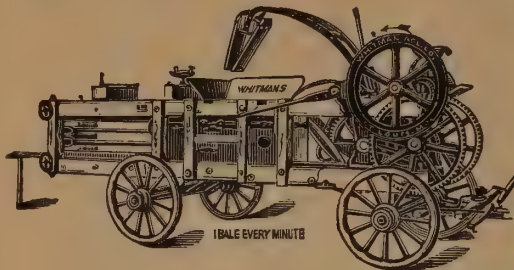
Every calf pasture should be provided with a shed, closed on three sides, as a place of retreat from chilling wind, pelting rain or burning sun, and a constant supply of fresh water. Calves always pay for such comforts in increased growth and general thriftiness. Other things being equal, the gentler the calf, the more rapid its growth, and the more comfortable and contented the calf, the gentler it is likely to be, especially if it associates its comforts with its keeper. Quite young calves will learn to nibble shelled oats and hay, if a handful of each is placed within easy reach. Tie the hay with a cord and hang it where the calf can pull at it without getting it under foot. Put the oats in a shallow, wide box. Remember that variety in food stimulates the appetite and digestion, health and growth following.

Hens kept in small yards for several generations are likely to weaken in vitality. They may lay well, but are poor breeding stock. Fresh blood from farm-raised fowls should be introduced every year.

Remember that good teams and good implements will enable us to do much more work, and that they are much cheaper than poor teams and implements. Human labor is the most expensive item used on a farm, or in any other business for that matter. We can't afford to throw away labor.

# Whitman's Baling Presses

THE LARGEST AND MOST COMPLETE  
LINE IN AMERICA



Full line of PORTER'S CATTLE FEEDING MACHINERY

ALSO MANUFACTURE

HORSE POWERS  
CIDER AND WINE MILLS

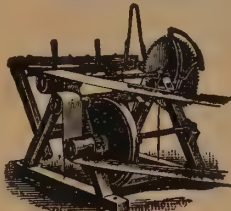
CORN SHELLERS  
GRAIN DRILLS

FEED MILLS  
SEED SOWERS

SEND FOR CIRCULARS AND PRICES

WHITMAN AGRICULTURAL CO., St. Louis, Mo.

DIAMOND POLE SAW



## DIAMOND BRAND ALWAYS RELIABLE

25,000 of our machines in the field,  
all giving the best of satisfaction.

WE MAKE ONLY GOOD GOODS  
WE SELL THEM AT REASONABLE PRICES  
WE WISH TO EXTEND OUR TRADE

Write us for prices, and our B-25 Catalogue, fully illustrating 46 different kinds of machines.



DIAMOND WINONA HORSE POWER



DIAMOND KING FEED-MILL

New Winona  
Manufacturing  
Company

940-990 W. 5th St.

WINONA, MINN.



HAY KING FULL CIRCLE PRESS

# BOLSTER SPRINGS

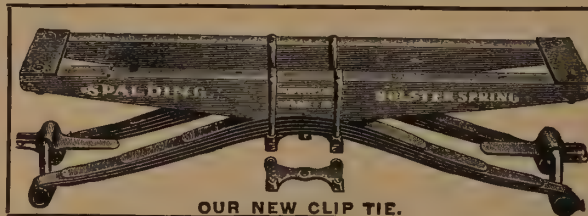
MANUFACTURERS  
E. B. ADAMS & SON  
RACINE, WIS., U. S. A.

BUGGY NECK YOKES, POLES, SHAFTS,

WAGON JACKS,

TEAM  
DOUBLE TREES,

THREE-HORSE  
HITCH.



OUR NEW CLIP TIE.

HAND-MADE  
HARNESS,  
ANTI-RATTLERS,  
AXLE WASHERS,  
ETC., ETC.

## THE SPALDING BOLSTER SPRING

stands pre-eminently first with the best dealers.

We also carry complete line of strictly first-class Horse Jewelry and Stable Hardware Specialties; together with Blankets, Robes, Whips, etc., etc. If you want good goods, write us for prices. If you are looking for cheap, flimsy stuff, don't waste your postage and time.



### American vs. European Freight Rates.

Our readers will be interested in the comparison drawn between the freight rates of this country and those of Europe, as stated by an undoubted authority, James J. Hill, president of the Great Northern railroad, and largely interested in steamship lines. At the monthly banquet of the Bankers' Club recently given in Chicago he said:

"The average rate paid in Great Britain is more than two and a quarter cents a ton mile. The averages on the continent outside of Russia are from two to two and a tenth cents a ton mile. Russia is about one cent and eight mills. In the United States about seven mills is the average rate, or less than one-third of the average rate charged throughout Europe. In Germany the rate is two cents a ton mile. The rates east of Chicago are, I may say, half a cent a ton mile. West of Chicago they are from three-quarters of a cent to nine mills. So that we have mastered the question of rail transportation or land transportation in a way that is far in advance of that of any of our European neighbors."

### Fence Telephones.

Pendleton, Ind., is the central station for a novel telephone system, and the scheme employed promises to solve the question of rural telephone service. The system, though at first glance it appears a joke, is decidedly practical.

The Big Four railway has barbed wire fence hemming in its right of way between Indianapolis and Anderson, and in this section most all the farmers used the barbed wire fence. An eccentric genius of the region contrived the idea of utilizing this fence for a telephone, and the top strand is now at work night and day. Where there were ditches he made an underground or overhead connection, and the same when there were roads.

When the line reached the outskirts of Anderson and Pendleton he got the right of stringing a wire on the electric light poles to the corporation limits.

The line now reaches from Ingalls through Pendleton to Anderson, a distance of sixteen miles, and will be carried on to Muncie. A factory at Ingalls and the office of the concern in Anderson are connected, and a store in Anderson and one at Pendleton have boxes. The best boxes are used, and the telephone works as satisfactorily as the best lines in the country. All that has been done has been to make the connections along the fences and to attach the boxes. In a few places the wire has been insulated by a coat of rubber paint, but this has not been necessary.

### Specific Gravity and Weight of Materials.

|                                  | LBS. | OZS. |
|----------------------------------|------|------|
| 1 Cube foot of water.....        | 62   | 8    |
| 1 Cube foot of fir.....          | 34   | 6    |
| 1 Cube foot of elm.....          | 37   | 8    |
| 1 Cube foot of beech.....        | 43   | 12   |
| 1 Cube foot of maple.....        | 47   | 3    |
| 1 Cube foot of ash.....          | 50   |      |
| 1 Cube foot of oak.....          | 57   | 13   |
| 1 Cube foot of mahogany.....     | 66   | 7    |
| 1 Cube foot of sand.....         | 95   |      |
| 1 Cube foot of chalk.....        | 112  | 1    |
| 1 Cube foot of common earth..... | 124  |      |
| 1 Cube foot of brick.....        | 125  |      |
| 1 Cube foot of clay.....         | 135  |      |
| 1 Cube foot of common stone..... | 156  | 4    |
| 1 Cube foot of flint.....        | 160  | 10   |
| 1 Cube foot of marble.....       | 169  | 1    |
| 1 Cube foot of granite.....      | 218  | 12   |
| 1 Cube foot of green glass.....  | 162  | 8    |
| 1 Cube foot of white lead.....   | 197  | 8    |
| 1 Cube foot of cast iron.....    | 404  | 1    |
| 1 Cube foot of wrought iron..... | 477  | 13   |
| 1 Cube foot of copper.....       | 562  | 8    |
| 1 Cube foot of lead.....         | 707  | 13   |

The outcome of progress in agriculture no man can guess. But it is certain that agriculture, as well as every other occupation that employs the time and energies of man, has illimitable possibilities before it. Mistakes will doubtless be made, enthusiasts will be led away by half truths and theories untried, but every year will bring us nearer perfection.

### Curing Meat.

We give two methods, highly recommended, for dry-curing meat:

Take one part brown sugar to ten parts of salt, and one ounce of saltpeter to each one hundred pounds of meat. Pulverize the last finely, and mix all together thoroughly. Lay the meat on a bench or table where it will not freeze, but will be cool. Rub the preparation all over each piece and pile the pieces together, but not over four high. Some liquor will gather and drop from the table, and provision should be made to catch it in a pail, in the interest of neatness. In a week repeat the process, but when the pieces are piled up that time reverse their position, and the sides that were up at first should be down next. In another week make the third application, and in a week or ten days more the pieces are ready for the smoke-house. The beef should be smoked a little only, or much less than the pork. Such meat is sweet, juicy, and will tickle any palate, and will be such a marked contrast to the hard-salted meat of commerce that it will tempt consumers to pay a good price for it. Meat so cured will keep until warm weather, and well into the summer if kept where flies can not get at it, as in paper bags and buried in oats, bran, salt or wood ashes.

Four hours after the hogs are killed, and before the meat is cooled through, cut them up and rub the joints and sides with this:

Common sugar, two pounds; salt, four quarts; saltpeter, three table-spoonfuls; black pepper, one-half pound. Mix hot, with just enough water to make a paste that will spread nicely on the meat. Rub both flesh and skin sides of all pieces, being careful to work in behind the shoulder blades, and into the ends of the shanks. Now cord up on a plank to drain. One rubbing is enough for small hogs. After a few days, when the meat has quit dripping, you should wash it and paint it with liquid smoke,

which you will find at the drug store. It comes in cans, and is best applied with a small paint brush. Do not apply but twice on small joints. This strikes in at once, and the meat is ready to eat in one day. The above is enough to salt the meat from four hogs weighing 1,000 pounds gross.

### Mississippi Hay.

The making of hay successfully in Mississippi is now beyond experiment and as a crop should engage the attention of every farmer. The best hay now known is that made from *Lespedeza striata*, or Japan clover. It is a leguminous plant, grows spontaneously in places, but can be planted and grown as other clovers. It will grow on any land in Mississippi, but grows tall enough for hay only on good land, but yields readily to fertilization. In using commercial fertilizers take equal parts of acid phosphate and German kainit. Apply 200 pounds per acre and the results are marvelous.

A chemical analysis of this hay made at the Agricultural College of Mississippi places it ahead of timothy, clover, pea-vines or any other grasses now being used for hay in the United States. It is the best paying crop that can be raised in Mississippi, as the expense of making it is so little. Once get the ground well set in it and it will last for years without re-seeding, provided it is not cut until the seed begins to ripen, which is the last of September.

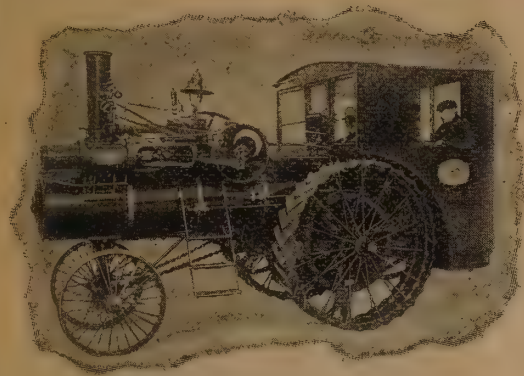
There are other grasses that make fine hay, Bermuda grass and the field-pea, for some classes of stock. Even the pest sedge grass makes good hay if cut before it gets into the stem state.

The largest amount of wool produced in the United States was in 1895. We clipped 309,748,000 pounds.

We have often wondered why people do not more generally grow popcorn; it is such a delight to children and is so healthy and desirable generally.



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The Port Huron Traction Engine.

THE GREATEST PULLER ON EARTH

Easily Operated.

**SIMPLE, DURABLE, STRONG.**

The acme of Engine Building.  
Economical Fuel Burner.....

With our newly perfected ROAD ROLLING Attachment the Engine WILL PAY FOR ITSELF in one or two seasons in any community seeking better roads.



The Port Huron Corn Sheller.

Greatest Capacity, Most Substantial, Fastest,  
Smoothest, Best.

**"Everything for the Thresherman"**



Rusher Feed Mill.

A Double Header. Grinds two different kinds of grain at the same time. Capacity, 90 bushels per hour.

Write for our 1901 illustrated catalogue, the only complete thresher catalogue ever issued, giving weights and measurements. If you are interested in the songs of the day send for

The Port Huron RUSHER, a crackerjack, free for the asking,

By mentioning this Almanac..

**PORT HURON ENGINE & THRESHER CO.**  
PORT HURON, MICHIGAN

### The Number of Sheep.

The number of sheep in the world, according to a late estimate of the Bureau of Statistics in Washington, is 410,301,000. Of this number more than a quarter are in Australia, the finest natural sheep-growing country in the world. The number of Australian sheep is placed at 110,534,000, or nearly 27 per cent of the total. Argentina comes next with 74,379,000, about 18 per cent. Russia in Europe has 44,465,000 head, going ahead of the United States with 28,652,000, according to the estimate of 1899, on which the comparison is made. The United Kingdom, France, Uruguay, Spain and Germany follow in the order named. A later estimate of the number of sheep in the United States, that of 1900, makes an increase of nearly 3,000,000 in the number, the present number in this country being 41,883,000. It is probable also that later estimates from some of the other countries would show a similar increase.

### Feeding Orchards.

When the requirements of orchards vary according to the condition and kind of soil, and the age and vigor of the trees, the following treatment will be found advantageous under most circumstances. A poor soil will require vegetable matter, and where crimson clover will succeed it will be found valuable. In the absence of the clover, barnyard manure should be used at the rate of six to ten tons per acre, applied once in three or four years. To assist in the decomposition of the vegetable matter lime should be applied broadcast once in five years.

Cultivation is indispensable to enable the soil to contribute its fertility to the trees. The surface must not be left untouched, to become covered with rank weeds or moss, to be bare and barren. A good harrowing in the fall and two or three in the summer will be all the cultivation an orchard requires.

One plan to destroy insects is to put plenty of ashes around the roots of the trees with now and then a little salt. If there is a bruised spot or a decayed place in a tree cover it, or fill it with ashes mixed with salt. Prune trees as soon as the leaves are off in the fall, and do not wait until spring.

One suggestion for renovating orchards is to turn in three times as many sheep as can live on the pasturage and feed them wheat bran. They scatter this added fertility all over the orchard and thus feed it and they do well themselves. They eat every apple that falls, worms and all, keep the grass eaten within a half-inch of the surface and as a result the sod is constantly growing better and the orchard improving.

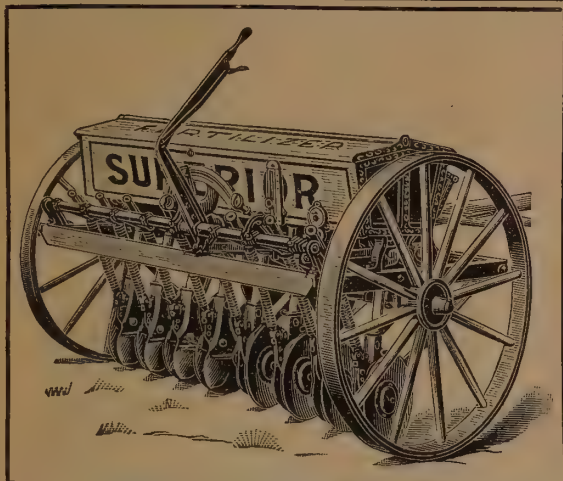
### Sales Days.

Farmers' public sales and exchanges give satisfaction in other countries, and have become an institution. They could be established in each county in most of our states at little or no expense. Most counties have permanent fair grounds, with stables, stock pens and other requisite appurtenances. These could be made available as places of meeting.

Very few farmers but have some kind of stock to sell or exchange any day, and few who do not desire to purchase something. Let those who wish to sell or exchange be present with their stock, and it is certain purchasers would attend. Now, when a person wants to buy a horse or a cow he has to run about the country a day or more, and then perhaps not get suited. Were there public sales days most of such purchasing would be deferred until their occurrence. These would be excellent opportunities to compare animals, breeds and prices. Sales might be private or by auction, as the owners choose. The first Saturday of each month, except the two warm busy ones (July and August) would be times for sales easily remembered.



# Superior Grain Drills



**W**ILL sow and cover grain wherever the Disc Harrow will run. The most reliable for sowing all kinds of grain, such as wheat, oats, peas, corn, beans, etc.

The original Disc Drill. We pioneered the Disc Drill business. You cannot make a mistake in buying the Superior Drill. We make them suitable for every grain-growing section in the world. One hundred different styles with or without fertilizer attachment. Write for catalogue.

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- 1 The Dixie and Columbia Grain Threshers, the greatest savers and cleaners on earth.
- 2 The Matchless Clover Huller, it saves  $\frac{3}{4}$  more seed than any other machine and cleans it to perfection...
- 3 The A. & T. Farm and Traction Engines, the easiest steamers and most durable in the world.
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Over the QUEEN & CRESCENT Route and its connections via Cincinnati, careful attendants look to your comfort, your meals (à la carte) are not surpassed in the best hotels, your rest is unbroken on the smooth, rock-ballasted roadway, you are not annoyed by change of cars; fatigue vanishes before some of the finest natural scenery in America.

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W. J. MURPHY, Cincinnati. W. C. RINEARSON, Gen'l Manager.

W. A. BECKLER,  
N. Passenger Agent, 113 Adams Street, Chicago.

### Care of Work Stock.

Farm work is usually begun with a rush in the spring, and many a mule and horse that have been lying idle a good share of the winter are injured by the first few days of hard spring work to such an extent as to render them useless, or at least less serviceable than they would have been, during the remainder of the season. A race horse is not expected to be able to run his best race after a month or more of idleness, and it is just as absurd to expect a draft animal to be able to perform the hardest labor without some preparation. Gradually increase the work and the feed at the same time, and never make a sudden change of either. To suddenly increase the work, and at the same time increase the feed, is calculated to produce colic and other kindred troubles. Again, many a shoulder or neck is made sore by the first few days' work, when a little attention would have prevented the trouble.

### Clean the Horse's Feet.

Farmers and horse breeders could learn a lesson from the big city stables in the care of the horses' feet. When they come in at night they are rubbed down and their feet cleaned. Any mud, manure or gravel that may be in the bottom of the foot is carefully cleaned out with a foot hook, so that the frog is clean and thus kept healthy. On many farms we see the horses go days and weeks without their feet ever being cleaned out, and the foot becomes foul, which often develops into thrush, and the horse goes lame just from carelessness. When on the road or in the fields horses are more apt to have clean, healthy feet than when kept standing in the stable. A good hook should be kept in the stable, and every horse should have his feet cleaned—if not daily, at least weekly—and if you find bad feet from neglect after thorough cleaning, let the horse stand on clean moist clay.

### Pasture Trees.

A few trees scattered over a farm not only add to the beauty of the landscape, but show that the owner is merciful to his beast. The shade tree may be productive of more than a shelter from the burning sun in midsummer, for in autumn it may bear a load of nuts that will gladden the hearts of the boys, who have none too many things to cheer them in their life upon the farm. Chestnuts, butternuts, shagbark walnuts all furnish toothsome nuts for the winter evening, while protecting the sheep or kine in summer. A farm with trees sells better than one without shade.

---

The celebration of the twenty-fifth anniversary of the establishment of American Experiment Stations was held recently in New Haven, Conn.

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The thrifty farmer, as a general thing, has plenty of money, rides in his own carriage, is well dressed and takes in nearly all the amusements that come along.

---

In winter our horses receive many moments of discomfort because of our thoughtlessness. Put the bridles behind the kitchen stove while you eat your breakfast, that they may not take cold iron into their mouths.

---

To test the value of soil for growing strawberries it is only necessary to sow the land in winter wheat. Any soil that will produce winter wheat successfully will produce strawberries with proper cultivation.

---

Horses that are moderately worked every day should have good appetites, and their digestion should be good. Some horses seldom have grass or green food. In such cases the food should be varied as much as possible, and linseed meal should be used to prevent constipation.





# DO YOU LOVE?



**TO SHOOT A RIFLE, PISTOL, OR SHOTGUN?** If so, we think we have something that will please you: **The Ideal Hand Book** of useful information to shooters. It will tell you what powder is best adapted to the different calibers, what shells to buy, and how to preserve them; how to prepare your own ammunition that will be **cheaper** and more **reliable** than factory cartridges. The book contains valuable tables, showing powder measurement for rifles and shotguns, with Nitro and Black Powders; also special instructions on loading shotgun shells with Nitro Powders, etc. **The Ideal Hand Book** is the recognized authority on matters pertaining to arms and ammunition. "A penny saved is as good as two earned." We wish to interest you, entertain you, save you a dollar, and make an honest dime ourselves. Will you let us? No shooter should be without it. Send 3 two-cent stamps with your address to **IDEAL MANUFACTURING CO., New Haven, Conn., U. S. A.**

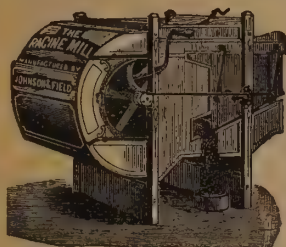
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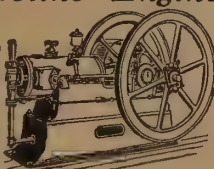
Any place  
By any one  
For any purpose

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State your power needs.

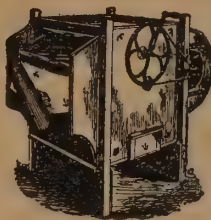
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Write us for our New Century Catalogue, sent free, of coiled, plain, farm and lawn fences and gates. The Jones National Fence Co., Columbus, Ohio

## The Webber Angle Sieve Grain Separator and Fanning Mill



THIS MILL SEPARATES suc-cotash, wheat and oats, barley and oats, timothy and clover, chess, cockle, wild mustard and wild oats from wheat or barley, rye from oats, **CLEANS** grain for the market, and **GRADES** grain for seeding purposes. Almost a **COMPLETE SEPARATION** THE FIRST TIME THROUGH. Some farmers call this mill "A Little Wonder." Ask your dealer for this mill. Take no other. If you can't get it, send to the sole manufacturers,

**HIRSCH BROTHERS,**  
271 Reed Street, Milwaukee Wis.  
MFRS. OF PATENT SPALDING SPRINGS.

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We make all kinds of  
Scales. Write for prices.



ALSO B. B. PUMPS AND WINDMILLS.  
**BECKMAN BROS., DES MOINES, IOWA**

## STOCK FEEDERS



listen to this and think before buying a feed grinder. There are thousands of **Peerless Mills** now in use. Grind ear corn and all grains fine or coarse. Make family meal or feed. We **WANT AGENTS EVERYWHERE.** Circulars, prices, &c., free.

**W. J. ADAM, JOLIET, ILL.**

### Value of Mixed Grain.

For soiling purposes a mixture of wheat, barley and oats gives profitable results. Cut it just before the blossoms appear. If a succession is sown the product may be had for use during the latter part of summer and early fall, at a time when pasturage is apt to be short.

The same mixture can be sown to advantage for the grain, which is particularly useful for fattening animals. The proportion of the mixture sown should depend somewhat on what grain grows best on the land you have, but usually of the three bushels required for an acre, two parts each of wheat and barley and one of oats would be about the proper proportion in making the mixture. Sow early in the spring, taking care that the soil is well pulverized, and that the seed is covered well. Harvest when the grain is well ripened, thresh and grind the grain together. Young stock particularly fare well on this ration, which is a well-balanced one.

### Watering the Cow.

No dairyman who makes a study of his business is satisfied with watering his herd once a day. If his cattle can be forced to drink two or three times a day he is glad of it. All the cattle may not be equally thirsty at the same time. Cows require an immense amount of water, as every farmer boy has noticed. Experiments have shown that the average milch cow needs eighty-one pounds a day while in milk—this is nearly ten gallons—and over fifty pounds while dry. Of this the cow in milk takes rather more than two-thirds as drink, and the rest is her food, while the dry cow takes rather less than two-thirds as drink and little more than one-third in her food.

Lambs a month old will eat a little grain food if it is finely ground, and it will do them good.

### Protection from Flies

A few whiffs of kerosene from an atomizer sprayed along the sides and around the legs of a cow will send every fly to the floor or hunting for an opening to get out of the stable. The kerosene comes out of the sprayer much like smoke, and but very little is required to clear the flies out of a small stable. At first the cow does not like to have the kerosene mist sweep over her, but she soon gets used to it, and when the stable door is opened she will make a wild dash for it, to get rid of her tormentors. Sometimes flies will gather on the walls inside the stable by the thousands, apparently waiting for the animals to come in. A few squirts along the walls with the sprayer will kill or drive them out in a hurry.

### Water Apparatus for Melons.

Water can be applied artificially, when the rainfall proves insufficient. For this purpose a joint of two-inch terra cotta sewer pipe is perpendicularly sunk in the hill before planting to the depth of six or eight inches, bell upward.

The seeds are planted around the pipe and the stand subsequently thinned down to one vine, whose roots will eventually surround the bottom of the pipe for quite a distance in all directions. The pipe itself should be filled with water late in the afternoon—every day if the weather is dry, or as often as may be found necessary. The continuous supply of moisture thus afforded will have a most noticeable effect by rendering every particle of plant food within reach capable of assimilation. Ordinary drain tile may be used in place of sewer pipe.

It pays to feed all young fowls liberally until fully matured. Fowls are not unlike calves, colts and other young things—once stunted they never fully recover their vigor; no matter how well fed.



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CHICAGO, MILWAUKEE  
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tickets via Chicago, Milwaukee and St. Paul R'y.



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### Water the Horse.

A man may be a good farmer and kind to his farm stock, yet he fails in one very important particular if the horses are not given plenty of good fresh water. The farmer is careful to provide a jug of water for himself, and to have it refilled several times during each half day, but it does not occur to him that the team he drives requires a large supply of water and needs it often. Not only is it humane to provide water for the horse, but it pays. The sweating process is a cooling one. This is nature's way of counteracting the heat, and when water is given in sufficient quantity to sustain the sweat, the horse can do more work with safety.

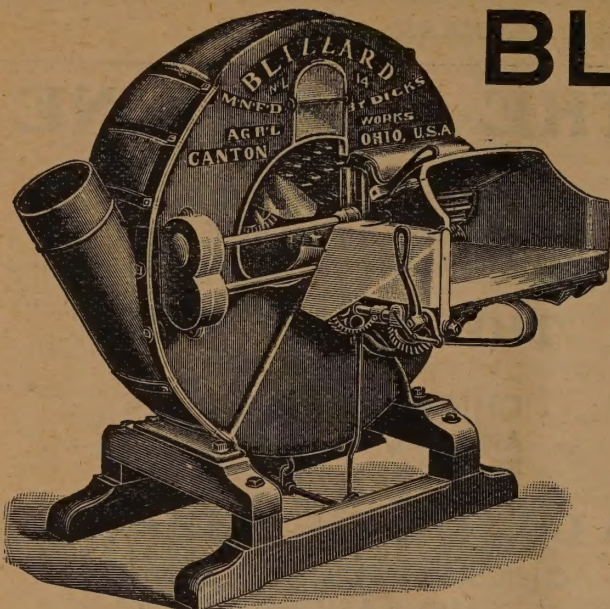
The demand for wool in this country is still improving, and consequently the supply of mutton is running short.

Keeping the space between rows mellow when the corn is below knee-high gives a chance for the main roots to make rapid progress in their search for plant food.

Bear in mind that crowded quarters for poultry mean disease and insects, to say nothing of general discontent. Fowls are companionable, but not to the extent of being crowded, especially when roosting.

The water supply should be abundant and convenient at all times, none the less in winter than at other seasons. This is more important to the young and growing stock than to mature horses. They should find it easy to get to water at any time, for when it is distant they put off watering until urged by extreme thirst, and then drink such quantities of icy water as to seriously interfere with digestion.





# BLIZZARD

Feed and Ensilage Cutter and Dry Corn Fodder Shredder with Pneumatic Elevator, all combined in one machine.

Cuts without shredding, shreds without cutting, or cuts and shreds at the same time.

And elevates green or dry fodder to any desired height, at any angle, through a pneumatic tube.

## FEED CUTTERS OUR SPECIALTY

SEVENTEEN DIFFERENT STYLES AND SIZES

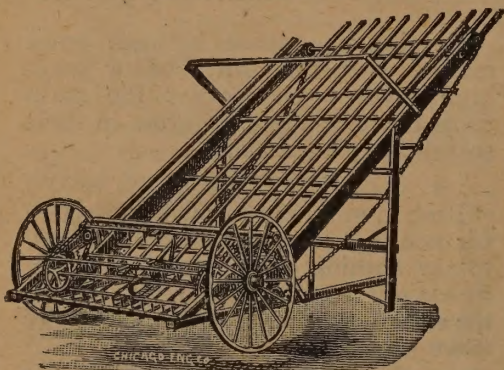
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Rear view of the Blizzard, with the feed table removed.

Every machine is tested before leaving factory, and guaranteed to do as represented.

ADDRESS **Joseph Dick Agricultural Works,**  
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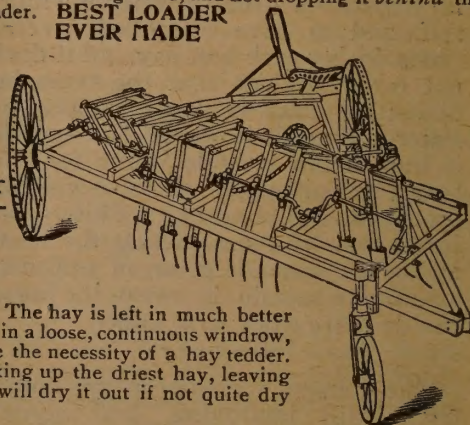
DOES NOT SCRATCH AND TEAR UP THE ROOTS OF THE GRASS. DOES NOT TAKE UP MANURE AND TRASH TO INJURE THE HAY LIKE OTHER LOADERS



## HAWKEYE HAY LOADER

Will take hay from the swath or light windrows, and windrows as made with side delivery rake. Most durable, strongest, and will outlast any loader made. Being the most serviceable makes it the cheapest.

Works on an entirely different principle from any other Hay Loader ever offered to the public. Rakes against and to the hay, and not from it, thereby taking the hay clean from the ground, and not dropping it behind the loader. **BEST LOADER EVER MADE**



## C. B. Q. SIDE DELIVERY HAY RAKE

What Farmers Need and Must Have.  
Only Successful One Made.

TEN YEARS IN THE FIELD.

The most laborious work in the hay field is made easy. The hay is left in much better shape than when a common rake is used. It throws the hay in a loose, continuous windrow, so that the sun and wind can penetrate it, and thus obviate the necessity of a hay tedder. The team goes around the field the same as the mower, taking up the driest hay, leaving it shook loosely in the windrows so that the sun and wind will dry it out if not quite dry when raked.

**CHAMBERS, BERING, QUINLAN CO.,** Manufacturers, **DECATUR, ILLS.**



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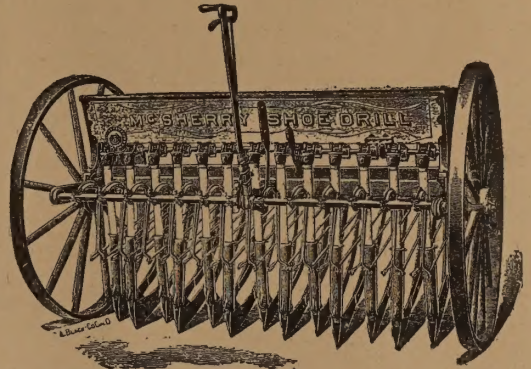
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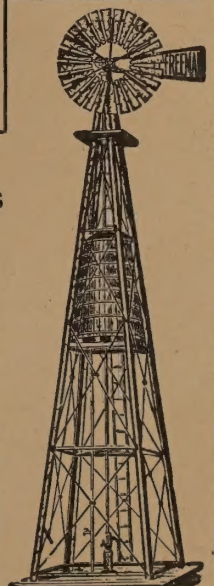
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The Wagon that has given Universal  
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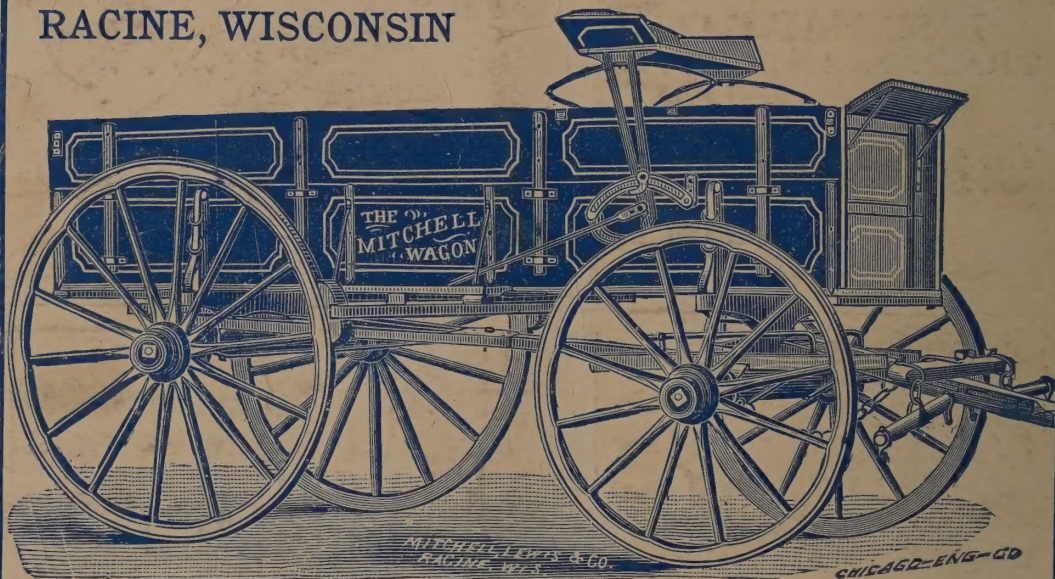
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